Digitized by the Internet Archive
in 2017 with funding from
The National Endowment for the Humanities and the Arcadia Fund

https://archive.org/details/texasmedicine73unse

Jan77 TexasMedicine

Sex and the preschooler Fetal monitoring

ntermittent neurogenic claudication Physicians' countersuits in Texas

Liability study commission recommendations

"Daddy, what's that?"

LIBRARY
U.C. SAN FRANCISCO
JAN 19 1977

Torbett-Hutchings-Smith Memorial Hospital
and Torbett-Hutchings-Smith Clinic

322 Coleman Street — Marlin, Texas 76661 — Telephone: 883-3561

Post Office Box 60

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M. D., F.A.C.S.
Cecil A. McRee, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M. D.
C. G. Brown, M.D.

VASCULAR SURGERY
Cecil A. McRee, M.D., F.A.C.S.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

TRAUMATIC AND ORTHOPEDIC SURGERY
D. R. Swetland, M.D., F.A.C.S.

ALLERGY
S. W. Hughes, M.D.

CARDIOLOGY
W. F. McKinley, Jr., M.D.

OBSTETRICS AND PEDIATRICS
William Pickvance, M.D.

RADIOLOGY
J.M. Brown, M.D., F.A.C.R.

PATHOLOGY
Ronald E. Henderson, Jr., M.D.
David M. McTaggart, M.D.
S. M. Bunn, Jr., M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

NEUROSURGERY
Harry W. Slade, M.D., F.A.C.S.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Associate Administrator:
Larry Parsons

Director-Coordinator, Nursing Service:
Vera Bee, R.N.

Director of Patient Care:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street — DALLAS, TEXAS 75211 — Telephone 823-4151

INTERNAL MEDICINE
John B. Allen, M.D., D.A.B.I.M.
Morris E. Magers, M.D.,D.A.B.I.M.
Channing Woods, M.D.
Richard C. Stone, M.D., Gastroenterology
Landon W. Stewart, M.D., D.A.B.I.M.
Cloyce L. Stetson, Jr., M.D., D.A.B.I.M.
David S. Sowell, III, M.D., D.A.B.I.M., Cardiology
Don E. Cheatum, M.D., D.A.B.I.M., and D.A.B. Rhu., F.A.C.P.
W. Mark Armstrong, M.D., D.A.B.I.M.
Sam W. Waters, M.D.
George E. Thomas, M.D., D.A.B.I.M.
Steven P. Bowers, M.D., D.A.B.I.M.

ORTHOPEDIC SURGERY
George S. Phalen, M.D., D.A.B.O.S., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
John B. Miller, III, M.D.
Vernie D. Bodden, M.D.

PEDIATRICS
Halcuit Moore, M.D., D.A.B.P., F.A.A.P.
P. E. Luecke, Jr., M.D., D.A.B.P., F.A.A.P.
Larry Gray, M.D., D.A.B.P., F.A.A.P.

GENERAL SURGERY
George P. Fosmire, M.D., D.A.B.S., F.A.C.S.
Miller S. Bell, M.D., D.A.B.S., F.A.C.S.

UROLOGY
Harry M. Spence, M.D., D.A.B.U., F.A.C.S.
William H. Hoffman, M.D., D.A.B.U., F.A.C.S.
Richard B. Dulany, M.D., D.A.B.U., F.A.C.S.

RADIOLOGY
Raymond W. Burford, M.D., D.A.B.R.
Joe B. Caldwell, M.D., D.A.B.R.
James B. Evans, M.D., D.A.B.R.

DERMATOLOGY
William N. New, M.D., F.A.A.D., F.A.C.P.

OTOLARYNGOLOGY AND OTOLOGIC SURGERY
D. W. Shuster, M.D., D.A.B.O.
James P. Albrite, M.D., D.A.B.O.

OPHTHALMOLOGY
R. M. Burnside, M.D., D.A.B.O.
James M. Copps, M.D., D.A.B.O.

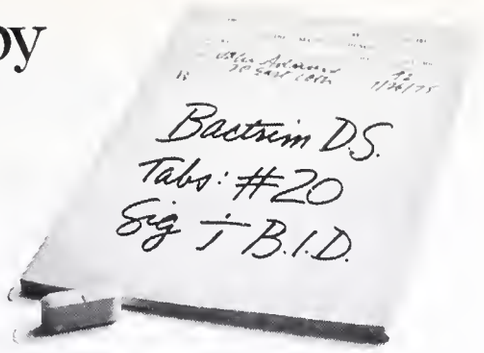
DENTISTRY AND DENTAL SURGERY
J. Boyd Hollabaugh, D.D.S.
William F. Walton, D.D.S.
George D. Blake, D.D.S.
Larry L. Cowsert, D.D.S.

ADMINISTRATION
C. H. Rosamond, Administrator
Jack Green, Associate Administrator

DIRECTOR OF NURSING SERVICE
Miss Billye J. Norris, R.N.

INACTIVE STATUS
George M. Underwood, M.D., D.A.B.I.M., F.A.C.P., Gastroenterology
P. E. Luecke, Sr., M.D., D.A.B.P., F.A.A.P
William H. Potts, M.D., F.A.C.P., Internal Medicine
Ozro T. Woods, M.D., Surgery Emphasizing Tumors
J. Wilbur Bourland, Jr., M.D., Obstetrics and Gynecology
Adam D. Green, M.D., Surgery
B. Celia Slaughter, M.D., D.A.B.P., F.A.A.P.
John B. Bourland, M.D., D.A.B.O.G.

10-day Bactrim therapy outperforms 10-day ampicillin therapy.



In a multicenter, double-blind study of patients with chronic or frequently recurrent urinary tract infection, Bactrim 10-day therapy outperformed ampicillin 10-day therapy by 27.2%, when comparing patients who maintained clear cultures for eight weeks. Criterion for "clear culture" was 1000 or fewer organisms/ml of urine.

While adverse reactions noted in this study were mild (*e.g.*, vomiting, nausea, rash), more serious reactions can occur with these drugs. See manufacturer's product information for complete listing. Maintain adequate fluid intake; perform frequent CBC's and urinalyses with microscopic examination.

Note: Bactrim tablets were used in these clinical trials. Bioequivalency studies show one Bactrim DS double strength tablet is equivalent to two Bactrim tablets.

Bactrim™ DS
(160 mg trimethoprim and 800 mg sulfamethoxazole)
Double Strength tablets
Just 1 tablet B.I.D.

Bactrim™
(80 mg trimethoprim and 400 mg sulfamethoxazole)
2 tablets B.I.D.

For chronic or frequently recurrent cystitis and pyelonephritis due to susceptible organisms.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Chronic urinary tract infections evidenced by persistent bacteriuria (symptomatic or asymptomatic), frequently recurrent infections (relapse or reinfection), or infections associated with urinary tract complications, such as obstruction. Primarily for cystitis, pyelonephritis or pyelitis due to susceptible strains of *E. coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris* and *Proteus morganii.*

NOTE: The increasing frequency of resistant organisms limits the usefulness of antibacterials, especially in these urinary tract infections. The recommended quantitative disc susceptibility method (*Federal Register*, 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. **Data are insufficient to recommend use in infants and children under 12.**

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for children under 12. Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) every 24 hours
Below 15	Use not recommended

Supplied: Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole — bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10.

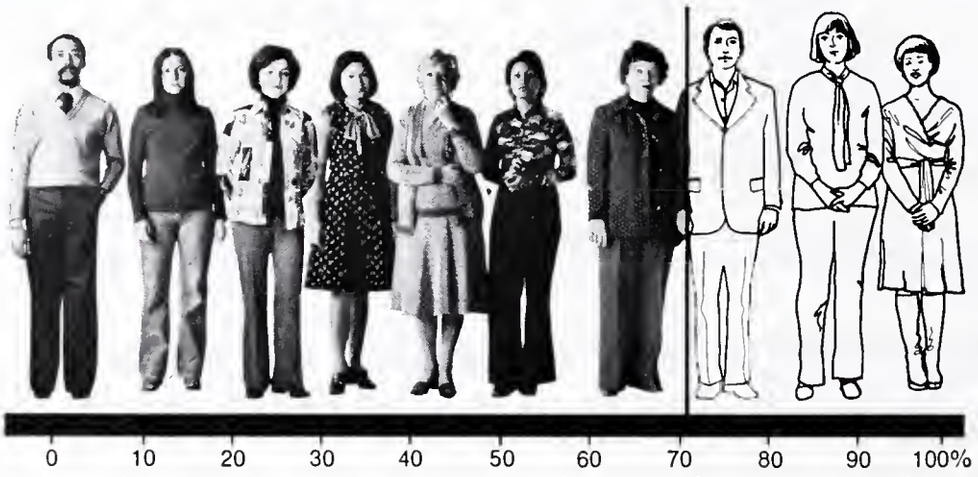
Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole; fruit-licorice flavored — bottles of 16 oz (1 pint).

ROCHE

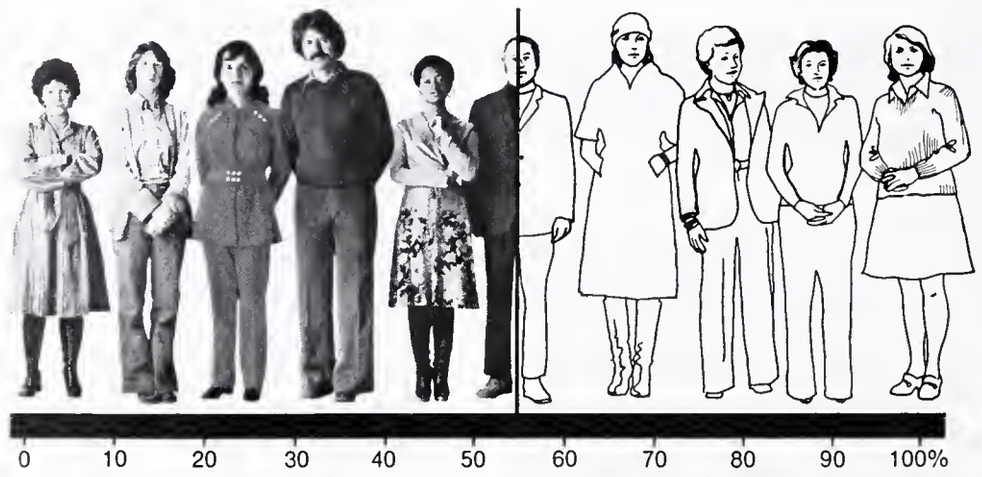
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

In a multicenter study of patients with chronic or frequently recurrent urinary tract infections

Bactrim was 27.2%* more effective than ampicillin in keeping patients infection-free for 8 weeks.†



Bactrim–70.5% of 78 patients infection-free at 8 weeks.



ampicillin–55.4% of 74 patients infection-free at 8 weeks.

*This percentage is arrived at by the statistical method of dividing the difference between Bactrim and ampicillin results (15.1%) by the percent of ampicillin results (55.4%).

†Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole)

Double Strength tablets Just 1 tablet B.I.D.

Note: Bactrim tablets were used in these clinical trials. Bioequivalency studies show one Bactrim DS double strength tablet is equivalent to two Bactrim tablets.

Please see summary of product information on preceding page.

ROCHE

Texas Medicine
VOL 73 JANUARY 1977

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION
Don G. Harrel, MD, Dallas
Chairman
Sam N. Key, MD, Austin
Vice-Chairman
Walter A. Brooks, MD, Quanah
Secretary
R. Harvey Bell, MD, Palestine
C. W. Yates, MD, Rosenberg
Paul R. Meyer, MD, Port Arthur
Joe T. Nelson, MD, Weatherford

TMA OFFICERS
L. S. Thompson, MD, Dallas
President
Sheridan S. Evans, MD, McAllen
Vice-President
John M. Smith, Jr., MD, San Antonio
President-Elect
James G. Morris, MD, Lubbock
Secretary
Ben R. Keller, Jr., MD, Arlington
Treasurer
C. Lincoln Williston, Austin
Executive Director

EDITORIAL STAFF
1905 N Lamar Blvd, Austin 78701
Telephone: 512-477-6704
Marilyn Baker, Managing Editor
Rae Vajgert, Assistant Managing Editor
Elise David, Assistant Editor
Donna Billie, Editorial Assistant
Patty Mullins, Secretary

ADVERTISING STAFF
1801 N Lamar Blvd, Austin 78701
Jon R. Hornaday, Advertising Director
Anne Shelnutt, Advertising Manager

SCIENTIFIC PUBLICATION COMMITTEE
Joseph M. Abell, Jr., MD, Austin
Chairman
Robert Askew, MD, Austin
Vice-Chairman
Ronald P. Boren, MD, Austin
Ernest C. Butler, MD, Austin
Jesse D. Cone, MD, Odessa
C. W. Daeschner, MD, Galveston
George A. Gates, MD, San Antonio
Tracy R. Gordy, MD, Austin
R. Maurice Hood, MD, Austin
Paxton H. Howard, Jr., MD, Temple
Joseph Lancaster, MD, Austin
Francis E. McIntyre, MD, Austin
Paul C. Peters, MD, Dallas
Richard S. Ruiz, MD, Houston
H. Irving Schweppe, Jr., MD, Houston
Theodore P. Votteler, MD, Dallas

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS
1801 N Lamar Blvd, Austin 78701
c/o Ray Riggs, Business Manager
$4 per year for members; $8 for non-members; $14 for foreign; $6 for libraries, hospitals, and universities; $4 for medical students. Single copy: $1.25.

CHANGE OF ADDRESS
1801 N Lamar Blvd, Austin 78701
c/o Edward R. Bierschenk, Membership Director

Copyright 1977 by the Texas Medical Association. Owned and Issued monthly by the Association.

Second Class Postage paid at Fort Worth, Texas, under act of March 3, 1879.

Contents

SCIENTIFIC ARTICLES

37 Sex and the preschooler
Guy S. Parcel, PhD

42 Fetal monitoring
Angel Werch, MD; Clark M. Hinkley, MD; Raymond B. Wait, MD

47 Neurological manifestations of systemic lupus erythematosus
Richard C. Senelick, MD

53 Intermittent neurogenic claudication
Bernard S. Epstein, MD; Joseph A. Epstein, MD; Malcolm D. Jones, MD

61 Massive bleeding from angiomyolipoma of the kidney
Inayat I. Lalani, MD

75 Leptospirosis in West Texas
Evret C. Newman, DVM; George E. Pool, BS

79 The premedical advisory process: attitudes of premedical advisors
Fernando M. Trevino, MPH; Raymond G. Fuentes, Jr; John G. Bruhn, PhD

86 Selecting a community for medical practice: A study of factors, characteristics, and preferences among practicing physicians, family practice residents and medical students
Marion R. Zetzman, DrPH; Constantine Stafanu, PhD

EDITORIAL

136 Government to investigate Medicaid abuse in Texas
A. Rex Kirkley, MD

FEATURES

93 Mario Ramirez, MD, wins the AMA Dr Benjamin Rush Award

95 Texas physicians in the Texas Legislature, "wrangling as well as lawyers"

NEWS

6 "Update on Legislative Issues" is topic for Winter Conference

7 Study Commission makes recommendations to 65th legislature

10 Medicaid investigations begin in Texas in January

12 AMA House approves four Texas resolutions

13 M.D. Anderson begins cancer facility in McAllen

13 March of Dimes will select Nurse of the Year

13 New medical school admission test unveiled

16 Pediatricians recommend new measles immunization schedule

16 Federal health spending may be $44.9 billion in 1978

21 Cancer patients do face job discrimination

22 Average pediatrician sees thirty-two patients daily

22 Inflation and wages increase medical service costs

24 Majority of Baylor graduates want primary care field

24 National education week on smoking is Jan 9-15, 1977

DEPARTMENTS

25 Capital Comments

27 Continuing Education

32 Coming Meetings

100 Information for Authors

101 Medicine and the Law

103 Medicine in Literature

111 Medical Newsmakers

114 Recent Deaths

ON THE COVER

Even very young children have sexual awareness, and people who work with children need to realize that the child's questions and actions are based upon his own level of understanding, which is not an adult level. "Sex and the Preschooler" offers helpful insight into the young child's concepts about sex.

NEXT MONTH

Articles scheduled for February are on categorizing emergency departments, hemodynamic effects of oral and sublingual isosorbide dinitrate in patients with acute coronary insufficiency, psychiatric manifestations of hyperparathyroidism, and assessing fetal maturity.

327243

What Makes A Hospital Great For Doctors?

- Doctor Management?
- A Growing Metropolitan Area?
- Close Linkage With Medical — Research Facilities?
- Constant Addition Of New Ideas, Young Ideas?
- All The Above?

We Think So!

That's why Pasadena Bayshore is the ideal place to begin your practice.

You'll help us continue to build greatness. You'll begin building your practice — your career — as you help the continued building of this 379 bed (soon to be 470 bed) hospital, situated in Pasadena, Texas — just north of the Space Craft Center — a few miles east of the Houston Medical Center.

Built by physicians, Bayshore has move-in options, services, and many special facilities designed to meet the individual physician's relocation needs. Check these advantages, then check with the Pasadena Bayshore Hospital.

- Ninety acre complex — space for growth.
- Ample office space presently available in modern, professional building.
- Importantly for young doctors — you are assured of an immediate practice. Talk with us about your income assurance during that first critical year.
- Lots available — room for your own office buildings.
- Doctor Management — doctors' needs are paramount.
- Highly-trained staff — superior general services.
- Specialized services and facilities — including nuclear medicine, obstetrics, cardiology (and psychiatry located in our separate Psychiatric Annex).
- For your convenience - answering service, full line of doctors' office supplies, and more.

For information call (713) 944-6666 EXT 221
Charles M. Cooper, Jr., Administrator

PASADENA BAYSHORE HOSPITAL

4000 Spencer Highway **Pasadena, Texas 77504**

THIS EXTRAORDINARY KID INGESTS ENOUGH IRON.

(19 of 20 preschoolers don't)

The data come from the recent survey designed to assess the nutritional status of the *entire* U.S. population. It is the *first* such survey.*

95% of our preschoolers had mean iron intakes about 2/3 of the standard.

Accordingly, *suspecting* iron deficiency routinely is not inappropriate. And, when your diagnosis is confirmed, consider whether dietary measures can correct the problem.

But when dietary change won't work, select a pleasant tasting dietary supplement with iron that encourages compliance.

INCREMIN®

Dietary Supplement

with IRON Syrup

It really tastes okay

Each teaspoonful (5 ml.) contains:

Elemental Iron (as Ferric Pyrophosphate)	30 mg
l-Lysine HCl	300 mg
Thiamine HCl (B_1)	10 mg
Pyridoxine HCl (B_6)	5 mg
Vitamin B_{12}	25 mcgm
Sorbitol	3.5 Gm
Alcohol	0.75%

DOSAGE: Prevention of iron-deficiency anemia — Children and Adults — 1 tsp. (5 ml.) daily. Treatment of iron deficiency anemia — Children: 1 tsp. t.i.d. Adults: 1 tsp. q.i.d.

SUPPLY: Bottles of 4 fl. oz. and 16 fl. oz.

Lederle

LEDERLE LABORATORIES
A Division of American Cyanamid Company
Pearl River, New York 10965

*First Health and Nutrition Examination Survey, DHEW Pub. No. (HRA) 74-1219-1, National Center for Health Statistics, Rockville, Maryland.

#029-7

NEWS

"Update on Legislative Issues" is topic for Winter Conference

The 1977 Texas Medical Association's Winter Conference, "An Update on Legislative Issues," will be Jan 15 at the Joe C. Thompson Conference Center in Austin.

Keynote speakers for the conference include Rep Robert Krueger, of New Braunfels, and Max H. Parrott, MD, of Portland, Ore, immediate past president of the American Medical Association.

Rep Krueger will discuss issues facing the new U.S. Congress. Dr Parrott, chairman of the AMA Commission on the Cost of Medical Care, will discuss medical care costs.

The conference will also include a session outlining the priorities and anticipated developments for TMA in 1977.

C. Lincoln Williston, TMA executive director, will present TMA's top 1977 priorities, and Paul Gray, TMA director of the Medical Services Department, will present survey data on physicians' practices.

The president of the Texas Institute for Medical Assessment (TIMA), Joseph T. Painter, MD, will discuss professional standards review organizations (PSRO) developments in 1977, and Rex Kirkley, MD, chairman of the Council on Tax-Financed Health Care Programs, will discuss Medicare, Medicaid and other government sponsored health care programs.

The afternoon sessions will highlight Texas issues affecting medicine. Speakers include Lt Gov William P. Hobby; William F. Ross, MD, chairman of the TMA Council on Medical Education and Hospitals; Clifford Burross, MD, member of the TMA Council on Medical Legislation; Ted H. Forsythe, MD, chairman of the TMA Committee on Nursing; and Ed W. Schmidt, MD, member of the TMA Council on Medical Legislation.

Also speaking will be Sen Kent Hance, of Lubbock; Rep Robert E. Davis, of Irving; Val Borum, MD, member of the Council on Medical Legislation; Sen Ray Farabee, of Wichita Falls; and Jack D. Maroney, JD, member of the TMA Legal Counsel.

Registrants will be guests of TMA for luncheon, and The Medical Protective Company will host a hospitality hour at the conclusion of the conference.

The conference is open to all members of the Texas Medical Association. There will be an Orientation Program for new members, and TMA boards, councils and committees will meet the weekend of the conference.

Study commission makes recommendations to 65th Legislature

Concluding that the malpractice insurance crisis has had a material adverse effect upon the delivery of medical and health care in Texas, the Texas Medical Professional Liability Study Commission has released its final report of recommendations for the 65th session of the Texas Legislature.

Since June 1975, the commission, composed of lawyers, doctors, insurers, consumers, legislators, and hospital personnel has studied the medical malpractice crisis in Texas. Representing the Texas Medical Association on the commission are E. Don Webb, MD, of Houston, and Milton V. Davis, MD, of Dallas.

The crisis has led to significant reductions of availability of medical and health care services to Texans, and there is a likelihood of further reductions, the commission reported. The crisis has also had a substantial impact on the physicians and hospitals of Texas, causing a dramatic rise in costs for adequate malpractice insurance for physicians and hospitals, the commission said.

Technological and scientific developments in health care delivery, changes in some doctor-patient relationships, changes in tort laws, and unmeritorious lawsuits have all caused the crisis in Texas, the commission said.

Following are some of the commission's recommendations:

Statute of limitations

The statute of limitations should be changed. A suit should be brought within one year after the injury is discovered or should have been discovered or no more than three years after the injury occurred, whichever occurs first.

The same limitation should apply to minors, except for a child under six who would have until his or her ninth birthday to bring suit.

Limitation on damages for pain and suffering

A ceiling of $100,000 for damages recoverable for pain and suffering should be implemented.

Periodic payments

Where the combined awards for future damages in the medical mal-

NEWS

practice action exceed $100,000, all future damages should be paid in periodic payments. If the injured person dies, payment for future medical expenses and future pain and suffering would cease. Damages for future loss of earnings unpaid at the time of death would be paid to a devisee, legatee, or heir of the estate of the injured party in a lump-sum amount based on its discounted value.

Screening panels

A mandatory screening panel procedure should be established before the filing of each suit. On the panel would be a district judge from the administrative judicial district in which the claim arose and three health care providers. The judge would preside, but would have no vote. The panel's findings would be admissible in the trial, but would not be binding on the jury. Members of the panel could be called as witnesses.

Arbitration

A voluntary binding contractual arbitration provides a useful alternative to litigation. Either party would be able to revoke an agreement to arbitrate within 30 days after official notice of dismissal from the hospital in contracts involving the institution and within 60 days after execution of the agreement in contracts involving a health care provider other than an institution.
Appeals from an arbitration award would be under the procedure of the Texas General Arbitration Act and applicable court rules.

Notice of intent to file suit

Sixty days before a formal action is filed in a court or a demand for arbitration is made, the injured party should give written notice to the provider and request negotiations to settle the claim.

Insurance rating

The State Board of Insurance should continue to use a prior approval system of rating medical liability insurance. Also, the requirement that Texas experience on claims and losses be utilized where credible should be continued.

Joint Underwriting Association

The Texas JUA should be continued for at least the next two years. The maximum limits on all forms of JUA liability insurance should be increased to $1,000,000 per occurrence and $3,000,000 aggregate per annum.
The composition of the JUA Board of Directors should remain unchanged.
The State Board of Insurance should be given the authority to add or remove various health care providers to and from jurisdiction of the JUA.

Texas State Board of Medical Examiners

The Texas Medical Practice Act should be broadened to allow the Texas State Board of Medical Examiners to discipline physicians for failure or inability to practice medicine in an acceptable manner consistent with public health and safety.
All persons, groups and organizations providing information as to physician incompetence or alleged violations of the Medical Practice Act to medical peer review bodies or to the Texas State Board of Medical Examiners should be granted civil immunity for such reporting. The immunity should be extended to all those who assist in the organization, as well as to the members of the State Board of Medical Examiners and peer review bodies and those that assist the Board and peer review bodies in functions.
The reporting of disciplinary actions taken by hospital medical staffs and other peer review entities of the Texas

. . . . . We advise that
your insurance benefits
are no longer payable and
this is the last check you
will receive.
We hope that payments
have been helpful during
your disability.
We wish you well. . . . .

When a claim is paid is a poor time to learn the insurance benefits you have — or worse, what you do not have.

Have you ever "put a pencil" to insurance proposals to find out exactly—

- how long disability income benefits are paid
- the percentage of the bill paid for hospital room and board and other hospital services
- amount paid for expenses outside the hospital
- the date on which coverage terminates due to age
- amounts paid for specific losses
- what are the exclusions

Please — for your peace of mind and our satisfaction:

compare the Insurance Program of the Texas Medical Association with any other program or proposal — *on a dollar for dollar and benefit for benefit basis.*

For a complete brochure or sample policies contact

TEXAS MEDICAL ASSOCIATION INSURANCE TRUST

1901 N. Lamar Blvd. Austin, Texas 78705 A.C. 512 / 476-6584

Prudential
Group Insurance

NEWS

State Board of Medical Examiners should be encouraged, but not mandatory. Lay members should not be appointed to the board. District review panels of the Texas State Board of Medical Examiners should be provided for, with members appointed by the governor. The panels are to operate under the regulations developed by the board, and are to have no final determinative powers. The State Board of Medical Examiners should be authorized to limit or restrict a physician's license to practice in one or more specified areas of medicine, to require physicians to participate in continuing or remedial medical education or counseling, and to require physicians to practice under the supervision designated by the board for a specified time period.

The State Board of Medical Examiners should be authorized to temporarily suspend the license of physicians whose continued unrestricted practice would constitute an immediate danger to the public, provided that a hearing take place as soon as possible after the license is temporarily suspended.

Continuing medical education

The bulk of research that has been done on the relationship between continuing medical education and a physician's ability to practice has demonstrated little positive correlation. These activities should be encouraged but not mandated as a condition of continued licensure.

Swine flu program halted

Federal health officials halted the nationwide swine flu inoculation program Dec 16, citing concern that the vaccine may be linked to a generally nonfatal but sometimes paralytic disease.

The Center for Disease Control (CDC) announced the program would be suspended for at least two weeks until an investigation is made exploring the connections between the vaccine and the Guillain-Barre syndrome.

After halting the program, CDC officials emphasized no link between the vaccine and the disease has been found, and that the program's suspension is only a precautionary measure.

When the program was halted, at least 96 Guillain-Barre cases, including two in Texas, had been confirmed.

James Sammons, MD, executive vice president of the American Medical Association, called the suspension a "correct decision."

"But, we would hasten to point out that no definite link has been established between the swine flu vaccine and the cases of Guillain-Barre syndrome," Dr Sammons said.

The cause of the syndrome is not known.

Victims of the disease generally develop a fever 20 to 21 days before the symptoms appear, followed in some cases by a muscle pain or stiff neck. The onset begins with weakness in the face or hands, and most often in the legs.

Medicaid investigations begin in Texas in January

The Medical Services Administration (MSA) of the Social & Rehabilitation Services of the Department of Health, Education, and Welfare will begin investigation of fraud and abuse in the Texas Medicaid program in January.

Physicians, pharmacies, and laboratories will be investigated in Dallas, Fort Worth, Houston, and San Antonio.

Fifty physicians in each city will be selected from the "high dollar" volume group.

An investigative team will visit each office, interviewing the physician and employees, and scrutinizing and photo copying selected patient records and laboratory work records.

Only a small minority of the health care professionals who provide care to the poor and needy under the more than $15 billion program engage in fraud and abuse, estimates David Mathews, Secretary of the Department of Health, Education, and Welfare. However, losses from fraud and abuse are estimated to be at least $750 annually.

Action to reduce fraud and abuse includes tighter management to prevent abuse, building better fraud detection and recovery systems, and more effective prosecution of violators.

Since last spring, federal and state examiners have been making on-the-spot reviews of health care providers in states having large Medicaid programs, probing the records of hundreds of physicians, pharmacists and laboratories.

Fraudulent activities are referred to state and federal investigative agencies for prosecution.

TMA employs new legal counsel

The Austin law firm of Brown, Maroney, Rose, Baker, and Barber is the new TMA legal counsel.

The firm is one of Austin's largest and most respected general practice firms, with a broad range of expertise and specialties.

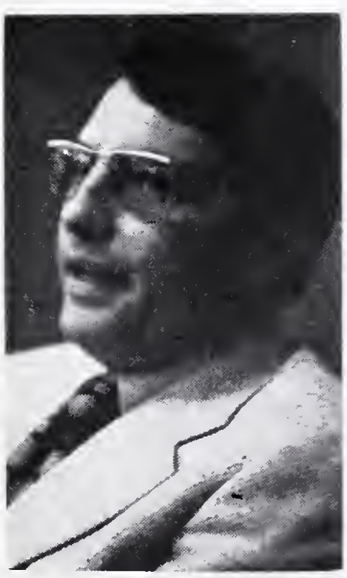
Within the firm Jack Maroney, JD, Will Barber, LLB, and Ace Pickens, JD, will have primary responsibility for TMA's legal services.

Maroney, a Dallas native and graduate of Southern Methodist University and The University of Texas Law School, is a Fellow in the American College of Trial Lawyers. Maroney has served as Director of the Texas Association of Defense Counsel and President of the Travis County Bar Association.

Barber, a graduate of the University of Texas at Austin and Harvard Law School, has served as a briefing attorney to the Texas Supreme Court. Barber is also Panel Member of the American Arbitration Association and the author-editor of published legal articles and periodicals.

Pickens was graduated from the University of Texas at Austin and the University of Texas Law School.

Philip R. Overton, former TMA legal counsel, will function with the firm on a consultation basis through 1977.



Ace Pickens, JD

Jack Maroney, JD

Will Barber, LLB

AMA House approves four Texas resolutions

The American Medical Association House of Delegates on Dec 5-8 approved four resolutions introduced by the Texas delegation, and referred another Texas resolution to the AMA Board of Trustees. A sixth Texas resolution contributed to establishment of a new AMA Section on Medical Schools.

The AMA House of Delegates adopted the Texas resolution asking the AMA to continue to implement the use of Current Procedural Terminology (CPT) in the Medicare program. Although most major carriers and programs have agreed to use CPT, the Bureau of Health Insurance, in the Department of Health, Education, and Welfare, has not accepted CPT for the Medicare program.

The Texas delegation was not successful in efforts to enable physicians to receive payment in the Medicare program without having to obtain the patient's signature on the claim form. The Reference Committee that considered the resolution said it would be unwise to seek change in the climate of pressure to eliminate potential for fraud and abuse in the Medicare and Medicaid programs.

The AMA will continue efforts to obtain legislative changes to assure exemption from income tax of amounts received from medical scholarships and loan programs. That policy directive was contained in a Texas resolution adopted by the AMA House of Delegates.

The AMA Council on Legislation reported it has already prepared legislation to assure exemption, and the bill will be introduced in the 95th Congress.

Acting favorably on a Texas resolution, the AMA reaffirmed the traditional role of the physician in the diagnosis and treatment of hearing, speech, and equilibratory disorders, as well as all other medical fields.

The Texas resolution said the American Speech and Hearing Association, a non-physician organization, has established a means of accrediting centers for treatment of hearing, speech, and equilibratory disorders without mandatory medical evaluation.

A Texas resolution, which declared that the withdrawal of the American National Red Cross from the National Blood Clearinghouse Program is unfortunate and not in the public interest, was adopted.

The Texas resolution placed the AMA on record in support of a non-replacement or deposit fee as an effective incentive for blood replacement, and as a method of financial savings for patients when blood is replaced by relatives or friends.

As advocated by the AMA Board of Trustees and a Texas resolution, the AMA has created an AMA Section on Medical Schools.

The Section will include deans who are active members of the AMA and up to five members of the administration or faculty of each approved medical school.

In another resolution, the TMA asked the AMA to reaffirm the policy that each patient admitted to an accredited hospital be designated to be under primary responsibility and continued care of a qualified physician. However, in view of legal considerations, the resolution was referred to the AMA Board of Trustees, with instructions to report back to the House of Delegates at the 1977 Annual Convention in June.

The Texas delegation also asked the AMA to oppose abuse of regulatory power through the use of transmittal letters to bypass publication in the Federal Register. AMA officials said that amendments proposed to the Administrative Procedures Act include restrictions on transmittal letters, and PSRO transmittal letters are advisory and can be held over for negotiations at the time of the next contract. The Texas resolution was not adopted.

M.D. Anderson begins cancer facility in McAllen

The University of Texas M.D. Anderson Hospital and Tumor Institute began operation of the cancer treatment facility of the Rio Grande Radiation Treatment Center in McAllen in January.

Under terms of the agreement, M.D. Anderson will staff and operate the center, which is owned by the nonprofit Rio Grande Radiation Treatment and Cancer Research Foundation, Inc.

The new radiation treatment center will have the capacity for about 6,000 cancer patient visits during the first year of operation, with the number doubling within two to three years.

"Among the 400,000 people in the lower Rio Grande Valley, we can anticipate that about 1,100 new cancer cases will be detected this year," said H.D. Gilliam, MD, president of the treatment center. "We expect that the new radiation treatment center will help fill a great need for the people in this area of Texas."

Nominations should be sent to the Texas Nurses Association, 314 Highland Mall Blvd., Suite 504, Austin 78752, no later than Feb 1, 1977.

New medical school admission test unveiled

The new Medical College Admission Test (MCAT), that will be given to an estimated 31,000 would-be physicians in the spring, has been unveiled by the Association of American Medical Colleges.

The test, which has been under development for three years, is designed to better try medical school applicants' ability to analyze and evaluate information in much the same way that a physician in practice might tackle a medical problem.

The test, basically multiple choice, will take a full day to complete. For a copy of the student manual, write, AAMC, One DuPont Circle NW, Washington, D.C., and enclose $3.25.

March of Dimes will select Nurse of the Year

The March of Dimes and the Texas Nurses Association are now accepting nominations for the March of Dimes Nurse of the Year Award.

The recipient will be honored for outstanding efforts in raising the quality of nursing care to mothers and infants in Texas.

To be eligible for nomination, the registered nurse candidate must be directly involved in maternal and infant health nursing through teaching, administration, research, and/or clinical practice, and committed to five years in this nursing specialty.

"That was an extremely effective description of scabies."

OPEN WIDE AND SAY . . .

AAAHHHHHHHH!

We've got more cars than you can shake a thermometer at. Any model, any make — American or foreign. You just choose the car you want. Load it up with all the extras. Then we'll make the leasing arrangements. All you have to do is get in and drive it away.

Why else should you lease from us?

- Low lease cost
- Tax write-offs
- Positive cash flow
- No record keeping necessary
- Custom-tailored leases
- Total maintenance of Lincoln-Mercury products.

Texas Medical Association Automobile Lease Program

Underwritten by:

Bankston Rentals, Inc. • 4747 LBJ Freeway • Dallas, Texas 75234 •214/233-1441
Southwest Motor Leasing, Inc. • 6737 Southwest Freeway • Houston, Texas 77074 • 713/777-3816

Executive Board decides 1977 TMA priorities

L.S. Thompson, Jr., MD, president, John M. Smith, Jr., MD, president-elect, members of the TMA Executive Board and TMA council chairmen met in Austin Dec 19 to discuss and decide 1977 Association priorities.

Because of *Texas Medicine* publishing deadlines, the results of the meeting will be reported in the February issue.

However, top priorities the board considered, included solutions to the professional liability insurance crisis in Texas and implementation of a professional standards review organization (PSRO) in Texas.

The board also considered issues of cost containment and assaults on physician professionalism by federal agencies and consumer groups.

Continuing education for physicians, access to health care in Texas, and funding for Texas primary care residencies were also considered by the board.

Medical series continues on Southern public television

The successful public television series, "M.D.," is expanding its role and will be broadcast throughout the South beginning in early January.

KERA/Channel 13, the Dallas public television station, will continue to produce the medical series in cooperation with the University of Texas Health Science Center at Dallas.

The show will now be taped and distributed by the Southern Educational Communications Association regional network to more than 60 public television stations.

Daniel W. Foster, MD, professor of internal medicine at the University of Texas Health Science Center at Dallas, will host the series, each week discussing a specific medical subject with guest physicians and researchers.

The show aims to communicate some of the latest medical information to the layman, Dr Foster said.

Income tax forms will arrive late in 1977

Taxpayers should receive their Form 1040 and 1040A income tax packages about two weeks later in 1977, than in 1976.

Late enactment of the Tax Reform Act of 1976 caused the delay, according to Robert M. McKeever, IRS District Director for southern Texas.

The 1976 Form 1040 packages should arrive at taxpayer's addresses by the middle of January, while the 1040A short form packages should arrive by January 7, McKeever said.

Mutual of Omaha is new administrator for Texas CHAMPUS program

Mutual of Omaha is the new administrator for the CHAMPUS program in Texas.

Mutual of Omaha replaced Health Applications Systems (HAS).

Mutual of Omaha, the former Administrator of the CHAMPUS program in Texas, reassumed duties effective Nov 16. The present contract will continue through Dec 31, 1977.

HAS had run up a backlog of 227,500 unpaid claims in five Southwestern states.

Health care is not a right, says AHA group

Access to health care is a right, but not health care itself.

So says the Regional Advisory Board 7, which includes Texas, of the American Hospital Association, in reviewing a policy on provision of health services.

The revision is being developed to assure, in light of finite resources, that overpromises are not made to the American public.

NEWS

HEW releases names of physicians earning $100,000 from Medicaid

The Department of Health, Education, and Welfare has released the names of 995 physicians who earned $100,000 in 1975 Medicaid payments.

The list included 33 physicians and 29 groups from Texas.

The HEW statement accompanying the names said, "The fact that the medical providers received the stated amount . . . should not be construed as any evidence of wrongdoing."

However, James H. Sammons, MD, executive vice president of the American Medical Association said, "This releasing of names is nothing less than an attempt at guilt by innuendo. It simply makes a tough practice tougher for the thousands of dedicated honest ghetto physicians. If HEW wants to drive medical care out of the ghetto completely, it has certainly hit upon a highly effective method."

Dr Sammons said the AMA favors prosecution to the fullest extent of the law of any persons—physician or otherwise—who defrauds patients or the government. "But we are tired of doctors being made the whipping boy by publicity seeking bureaucrats and politicians," Dr Sammons said.

Pediatricians recommend new measles immunization schedule

Measles immunization should be delayed until 15 months of age for infants who live in communities where the disease is not prevalent, recommends the American Academy of Pediatrics (AAP).

However, during the course of measles outbreaks, vaccine should be given any time after six months of age followed by a second inoculation after 15 months of age.

The AAP bases its recommendations on results of four recent studies which indicate that the optimum age for measles immunization is 15 months, rather than 12 months.

These studies show the antibody response at 12 months ranging between 80-85 percent, while it was more than 95 percent if measles vaccine was given after 13 or 14 months of age.

The AAP points out that despite the more than 90 percent decrease in the number of reported cases of measles, periodic outbreaks still occur among unimmunized children and among those who were immunized, but for whom the vaccine was not successful. By giving the vaccine at the optimum age, the AAP hopes to reduce these outbreaks.

Federal health spending may be $44.9 billion in 1978

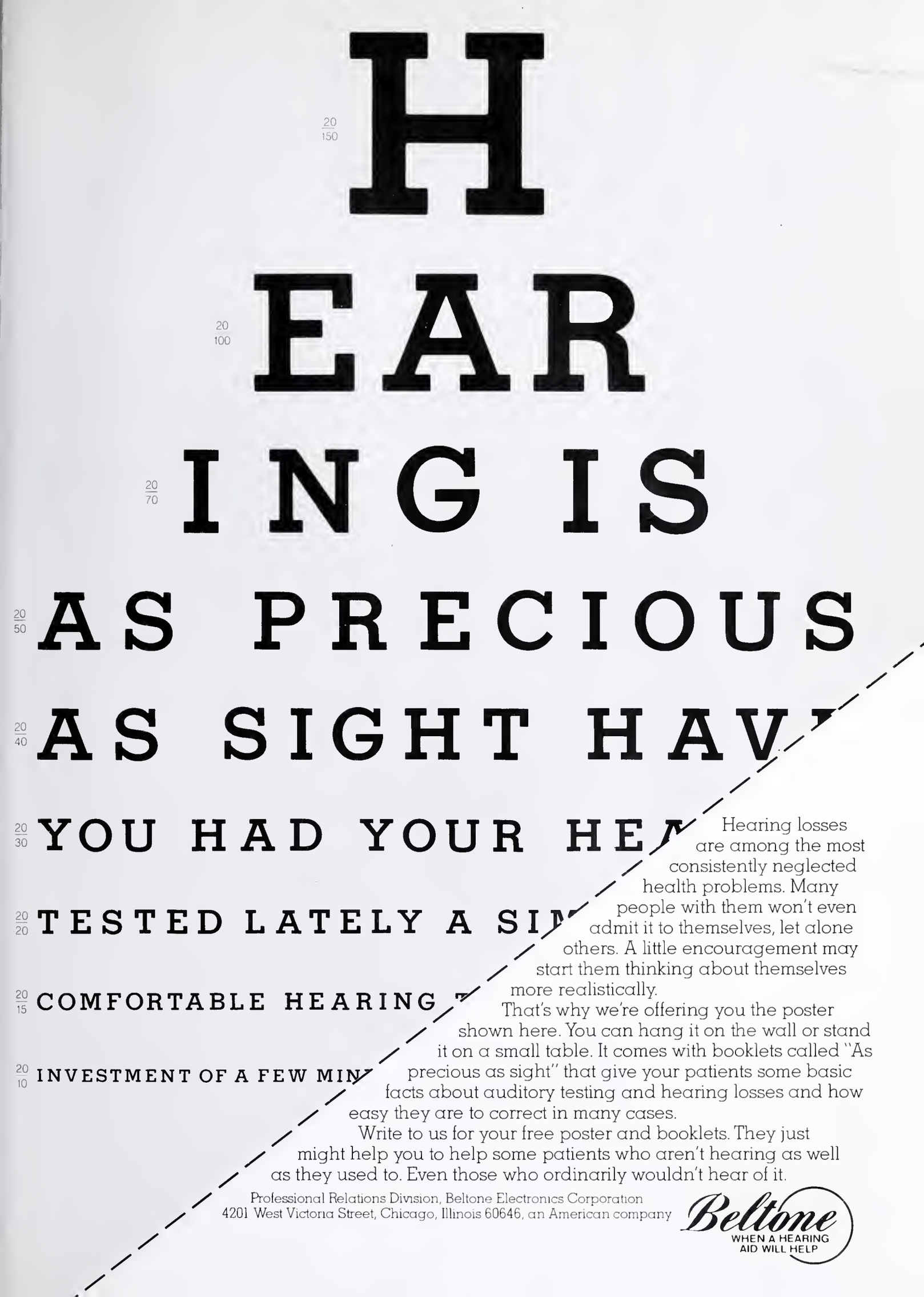
Federal spending for health may total $44.9 billion in fiscal year 1978, the White House told Congress.

The estimated total for fiscal year 1977 is $39.5 billion and the actual total for fiscal 1976 was $33.5 billion.

The projection to 1978 assumes continuation of ongoing federal health programs at 1977 levels.

Medicare and Medicaid will account for most of the 1977-1978 increase.

Medicare outlays are expected to reach $25.9 billion in 1978 (up $3.8 billion from 1977) while federal outlays for Medicaid are expected to total $11.8 billion in 1978 (up $1.5 billion from 1977). These increases are required by existing law, the White House said.



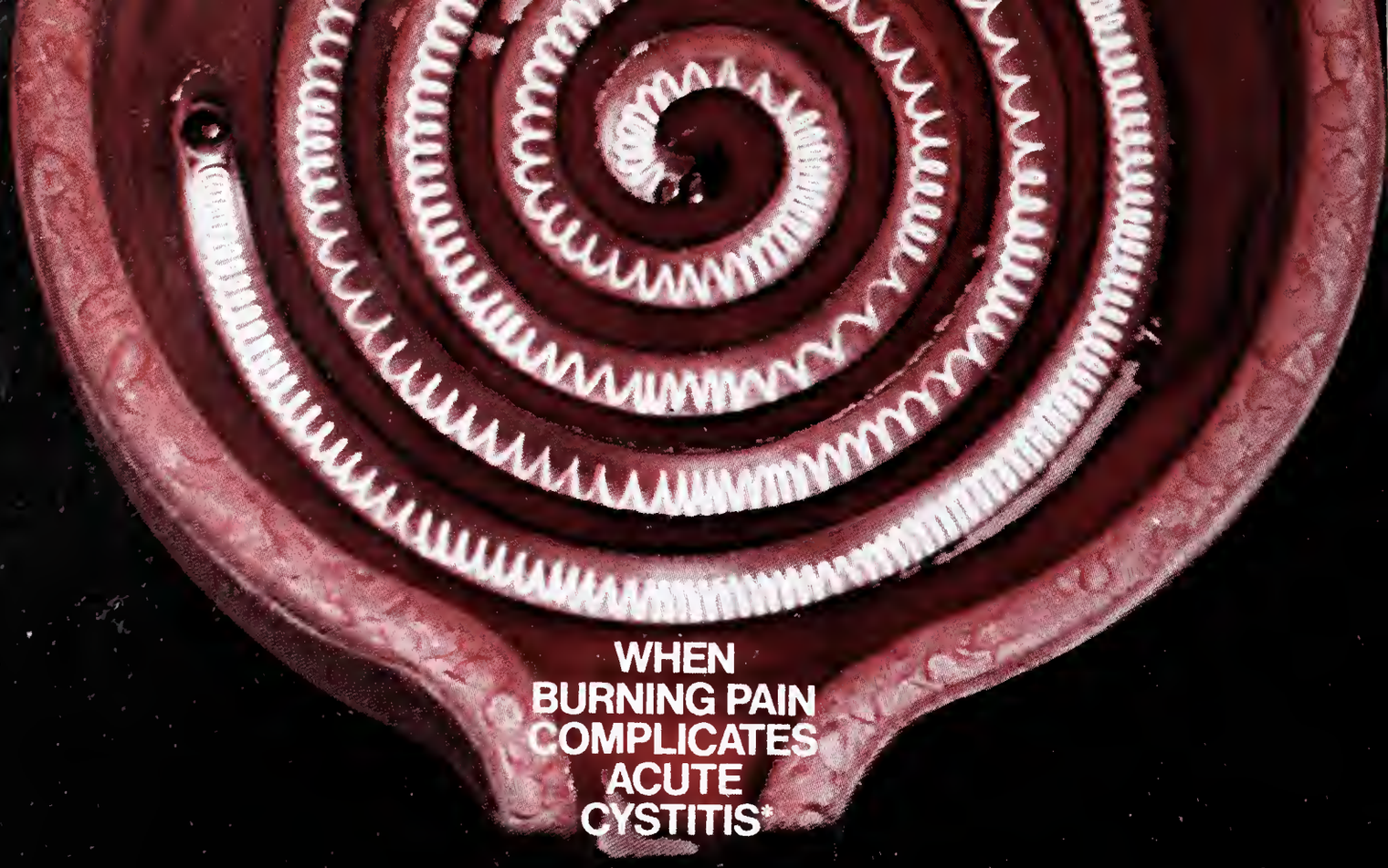
Hearing losses are among the most consistently neglected health problems. Many people with them won't even admit it to themselves, let alone others. A little encouragement may start them thinking about themselves more realistically.

That's why we're offering you the poster shown here. You can hang it on the wall or stand it on a small table. It comes with booklets called "As precious as sight" that give your patients some basic facts about auditory testing and hearing losses and how easy they are to correct in many cases.

Write to us for your free poster and booklets. They just might help you to help some patients who aren't hearing as well as they used to. Even those who ordinarily wouldn't hear of it.

Professional Relations Division, Beltone Electronics Corporation
4201 West Victoria Street, Chicago, Illinois 60646, an American company

Beltone
WHEN A HEARING AID WILL HELP



WHEN
BURNING PAIN
COMPLICATES
ACUTE
CYSTITIS*

TURN IT OFF WITH

AZO GANTANOL®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

FOR THE PAIN

- Quickly relieves painful symptoms such as burning and pain associated with urgency and frequency.
- Recommended antibacterial therapy: up to 3 days with Azo Gantanol, then 11 days with Gantanol (sulfamethoxazole).

FOR THE PATHOGENS

- Effectively controls susceptible pathogens such as *E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris.*

*nonobstructed due to susceptible organisms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis,* and, less frequently, *Proteus vulgaris)* in the absence of obstructive uropathy or foreign bodies.
Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

Warnings: Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *G.I. reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Azo Gantanol is intended for the acute painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

NOTE: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine.

Supplied: Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

DYAZIDE®

Trademark

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE FOR LONG-TERM CONTROL OF HYPERTENSION*

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* WARNING
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the fixed combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium-sparing action of its 'Dyrenium' component is warranted.

Contraindications: Further use in progressive renal or hepatic dysfunction; hyperkalemia. Preexisting elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs. Routine use of diuretics in otherwise healthy pregnancy.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in severely ill patients with urine volume less than one liter/day, the elderly or diabetics, with suspected or confirmed renal insufficiency. Periodic determinations of serum K^+ should be made. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **The presence of a widened QRS complex or arrhythmia in association with hyperkalemia requires prompt additional therapy.** Thiazides are reported to cross the placental barrier and appear in breast milk; fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and other adverse reactions that have occurred in the adult may result. When used in pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics, or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium® (triamterene, SK&F Co.), and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Do periodic blood studies in cirrhotics to check for nondrug-related variations in blood pictures, and in patients with folic acid depletion, since 'Dyrenium' may contribute to appearance of megaloblastosis. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

SK&F CO., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

BURROUGHS WELLCOME CO. MAKES CODEINE COMBINATION PRODUCTS.

YOU MAKE THE CHOICE.

EMPIRIN® COMPOUND c̄ CODEINE #3

Each tablet contains:
codeine phosphate, 32 mg (gr ½),
(Warning: May be habit-forming);
aspirin, 227 mg; phenacetin, 162 mg;
and caffeine, 32 mg.

EMPRACET™ c̄ CODEINE #3

Each tablet contains:
codeine phosphate, 30 mg (gr ½),
(Warning: May be habit-forming);
and acetaminophen 300 mg.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Cancer patients do face job discrimination

A study of work experiences of cancer patients shows that cancer patients do face job discrimination not only in hiring and firing, but also in attitudes, job assignments, and benefits.

The study was reported in the 1976 Vol 22 Number 2 of *The ACS Volunteer* published by the California Division of the American Cancer Society.

The study was made for the American Cancer Society's California Division by Professor Frances L. Feldman of the University of Southern California School of Social Work. The study shows that more than half (54%) of the persons interviewed described at least one work problem related to their illness.

Nearly one-fourth (22%) reported being rejected for jobs because of previous cancer treatment.

More than one-third (39%) said they fear future job discrimination.

Of the 29% who were no longer working for the same employer as before their cancer diagnosis, 40% left for cancer-related reasons, and 8% said they had been dismissed or pressured into leaving because of their cancer treatment.

Nineteen percent in the survey thought working conditions or salary levels had been adversely affected.

Almost two-thirds of those working part-time and 40% of the unemployed were unable to find full-time work. They blame their failure on their cancer history.

A small group (5%) reported reduction in health benefits or exclusion from group health plans and eight percent were ineligible for any or for increased group life insurance coverage.

However, not all of the results were negative.

Nearly half (46%) said they had never had work problems because of their cancer. More than three-quarters of the group reported salary increases, many because of promotions or increased job responsibilities.

The conclusions are based on 92 in-depth interviews and three group sessions with 38 other persons treated for cancer.

The study was designed to include the most employable people in the work force, according to Professor Feldman. The sample was limited to persons 25-50 years of age who were working at the time of cancer diagnosis, who had at least a high school education, and worked in one of six occupational groups calling for some special education or on-the-job training.

The cancer treatment was recent enough that the influence of the troublesome five-year cure mark could be determined.

Committee on Philosophy and Medicine publishes bioethics newsletter

The American Philosophical Association's Committee on Philosophy and Medicine publishes a newsletter for persons interested in bioethics, philosophy, and medicine.

Subscription requests can be sent to John Ladd, APA Committee for Philosophy and Medicine, Box 1918, Dept. of Philosophy, Brown University, Providence, RI 02912, with $2 for printing and mailing costs.

The committee plans to publish in a future issue a list of schools that have or anticipate having full or part time positions in medical ethics. Those with information about positions in medical ethics are asked to send the information to Editor of the Newsletter, David Mayo, Dept. of Philosophy, University of Minnesota-Duluth, Duluth, MN 55812.

NEWS

Average pediatrician sees thirty-two patients daily

The average pediatrician in the United States is 45.5 years old, makes $15.80 an hour, works about 60 hours a week, and personally sees 32 patients a day.

That data was revealed by a new survey conducted by the American Academy of Pediatric's Committee on Manpower.

While 55 percent of the respondents felt that remuneration for their services is inadequate, if they had "to do it all over again," 95 percent would still choose to be physicians, and 80 percent would still select pediatrics as a specialty.

The survey indicates that 16.8 percent feel they are "too busy" while 14.7 percent of the physicians classify themselves as "not busy enough."

Almost 100 percent of the respondents would take on new non-government patients; 75 percent of the pediatricians said they readily take on new Medicaid patients, and in many instances donate services to the patient.

The majority of the pediatricians (57 percent) practice in urban areas, while 32 percent practice in suburbs, and eight percent in rural areas. The income for rural physicians is about $8,000 a year less than for a suburban one.

There are 18,820 practicing pediatricians in the United States; 1,300 participated in the three part survey. The AAP projected there will be 31,000 pediatricians in the United States by 1980.

Survey shows 84% of women physicians work full time

Women doctors are doing their full share of caring for patients, along with being wives and mothers, a survey in the Detroit area indicates.

Of women physicians surveyed by a research group from Wayne State University, 84% are engaged in medical work, most of them full time.

Only 7% are not working for reasons related to being a woman, notably staying home to care for children and household. Some of those not working are retired or disabled, as the age range of the survey was from 30 to 86 years.

More than half of the women doctors are in private practice and in primary care specialties. More than half are board certified.

Doctors often marry doctors, the survey found. Some 67% of the feminine physicians are married, 43% of them to doctors.

There are more than 30,000 women physicians in America, more than 8% of all doctors. The report predicts that in a few years one fourth of all physicians will be women.

Inflation and wages increase medical service costs

Inflation, increased malpractice premiums, and higher wages and benefits for employees are the main reasons it costs more to provide medical service today, according to an AMA poll of American physicians.

Nine out of ten physicians said their practice overhead costs had increased in the last three years.

Forty-four percent estimated that cost increases ranged between 26% and 50%, and 42% said the increases were 25% less.

Eighty-five percent of those polled believed that, taking all health service costs into account, the greatest savings could be in hospitals, while only 6.4% thought substantial savings could be in medical office practice.

According to the survey, the physicians also believed that government programs, such as Medicare and Medicaid and expensive new technology, are forcing medical care costs higher.

Keep your office in good health.

Give it regular checkups.

Just like a patient, your office deserves proper attention. Equipment and supplies should be given regular checkups to make sure it's readily available and in good working order. And when you come up short, the Gentec Hospital Supply phone number should be close at hand.

Gentec provides a complete line of office supplies and equipment, plus training for your staff in the operation of all medical equipment. A periodic safety inspection program we call "Safety Through Service" to insure the operational efficiency of your equipment and machines. And fast delivery because you require it.

We know you have your share of emergencies. But when you rely on Gentec — supplies and equipment won't be among them.

Gentec
Hospital Supply Company
Division of Foremost-McKesson, Inc.
TERRELL SUPPLY DIVISION

P.O. Box 310, Fort Worth/Dallas 76101
Phone: AC 817 336-8731
Metro: AC 214 429-2566

P.O. Box 4415, Austin 78723
Phone: AC 512 478-2559

P.O. Box 32107, San Antonio 78216
Phone: AC 512 344-0213

P.O. Box 1587, Amarillo 79106
Phone: AC 806 376-4696

P.O. Box 2913, Lubbock 79408
Phone: AC 806 763-4655

P.O. Box 1609, Houston 77001
Phone: AC 713 237-9678

NEWS

Majority of Baylor graduates want primary care field

More than 60% of the 21 new doctors of medicine that were graduated from the Baylor College of Medicine last fall are planning health careers as primary care physicians.

Baylor is placing increasing emphasis on training in primary care, which includes family practice, internal medicine, and pediatrics. This means that Texans will have access to more doctors who are capable of meeting a majority of their total health care needs, according to William T. Butler, MD, Baylor's acting executive vice president.

"By establishing a program in family practice, instituting a preceptorship program which allows students to study with physicians across the state, and creating a tour program which enables students to visit with alumni in practice, we are exposing them to the realities of medical practice in different settings.

"These experiences help students define their career goals and make decisions based on knowledge, not speculation," Dr Butler said.

Material is requested for biography of Alton Ochsner, MD

Ira Harkey, PhD, of Metairie, LA, is compiling a biography of Alton Ochsner, MD, of the Ochsner Clinic in New Orleans.

Opinions, evaluations, anecdotes, reminiscences, and photos of Dr Ochsner are needed. Photos will be returned.

Material should be mailed to Ira Harkey, PhD, 401 Metairie Road, 706, Metairie, LA, 70005.

National education week on smoking is Jan 9-15, 1977

"Help Yourself—Help a Friend," is the theme for National Education Week on Smoking, Jan 9-15, 1977, sponsored in Texas by the Texas Interagency Council on Smoking and Health.

The Texas Medical Association is a charter member of the 12-agency council. Homer R. Goehrs, MD, president-elect of the Travis County Medical Society, is chairman of the council.

The council offers two "Thank You For Not Smoking," signs to Texas physicians. One is 8½ by 11 inches and suitable for framing, and the other is a small card. Both are available without charge from the Texas Interagency Council on Smoking and Health, 1100 W. 49th St., Austin, 78756.

INVESTMENT PERFORMANCE FOR TMA MEMBERS' RETIREMENT PLAN & TRUST

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1976 Through 11/30	3 Years Ended 12/31/75	5 Years Ended 12/31/75	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	+12.8%	−33.0%	− 6.2%	1.2%
Loomis-Sayles Mutual Fund	+ 8.1%	−21.0%	− 3.7%	3.2%
Mercantile Bank Equity Fund	+12.5%	−35.8%	−16.5%	3.5%
Mercantile Bank Fixed Income Fund	+ 8.3%	−13.5%	− 8.6%	7.4%
T Rowe Price Growth Stock Fund	+ 6.4%	−34.1%	− 1.9%	2.1%
T Rowe Price New Income Fund	+ 4.6%	N/A	N/A	7.7%
Stein Roe & Farnham Balanced Fund	+ 6.9%	−24.9%	+ 4.1%	3.2%
Standard & Poor 500 Stock Average	+13.2%	−30.9%	− 2.1%	
Dow Jones Industrial Average	+11.1%	−16.4%	+ 1.6%	

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

AUSTIN: STATE BOARD OF MEDICAL EXAMINERS. Gov Dolph Briscoe has appointed the following to the Texas State Board of Medical Examiners: J.G. Rodarte, MD, Temple, reappointed; Charley E. Wysong, MD, McKinney, reappointed; James R. Wynn, MD, Uvalde, appointed to the unexpired term of Howard O. Smith, MD, Marlin; and Cliff Burross, MD, Wichita Falls, appointed to six-year term.

AUSTIN: NEW TEXAS LEGISLATURE. Forty new and 110 incumbent members compose the 1977 Texas House of Representatives. The new House includes 133 Democrats and 17 Republicans. The Texas Senate has three new members, all formerly members of the Texas House of Representatives, and 28 returning members. In 1977 the Senate has three Republicans and 28 Democrats, the same as 1975.

WASHINGTON: TALMADGE PROMISES MORE MEDICARE-MEDICAID AMENDMENTS. Sen Herman Talmadge (D-Ga), chairman of the Senate Finance Health Subcommittee, has said he will be concentrating in 1977 on hospital costs in the Medicare and Medicaid programs. He will also resume his legislative attack on Medicare-Medicaid fraud and abuse. Speaking to the Hospital Association of Pennsylvania, Talmadge said early in the new Congress he will introduce a modified version of his Medicare-Medicaid amendments (S3205). The revised bill will include appropriate language intended to make sure that cost determined as excessive for purposes of Medicare and Medicaid payment will not be passed on to another nongovernment payer such as Blue Cross.

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber, Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

WASHINGTON: MEDICARE REIMBURSEMENT. The solution to physician reimbursement problems under Medicare "will occur only when Congress is willing to adopt a policy of reimbursing for services rendered at a level more nearly reflective of usual and customary charges," AMA Board of Trustees Chairman Raymond T. Holden, MD, told the House Ways and Means Subcommittee on Health. The real issue, he said, is "promises versus payment by the federal government." Dr Holden said charges recognized under Medicare have never led to inflation but instead have followed the inflationary spiral. Physician charges are based on data that is up to two years old, putting physicians in the position of absorbing today's increased costs while being reimbursed on the basis of yesterday's charges.

AUBURN: PHARMACIST, NOT PHYSICIANS, SHOULD PRESCRIBE DRUGS. The chairman of the Consumer Product Safety Commission said in a recent speech at Auburn University that pharmacists, not physicians, should prescribe drugs. John Byington, a pharmacist and lawyer, was dedicating a new pharmacy building when he said such a role for pharmacists would relieve physicians of "the significant burden of keeping current with drug therapy" and enable them "to concentrate on the diagnostic aspects of medicine for which they are primarily trained."

WASHINGTON: WELFARE REFORM TASK FORCE. Idaho Gov Cecil D. Andrus, chairman of the National Governors Conference, has announced formation of a task force of elected state and local officials to lead a drive for welfare reform in the next Congress. Washington Gov Daniel J. Evans will be chairman of the new group, which includes the Governors Conference, the National Conference of State Legislators, the National Association of Counties, the National League of Cities, and the U.S. Conference of Mayors.

TEXAS: SUIT FILED TO HALT NORTH CENTRAL TEXAS HSA. A suit filed in a Tyler federal court seeks to stop operation of the new North Central Texas Health System Planning Agency. The suit, filed by the Texas Association of Community Groups Organizations for Reform Now (ACORN), alleges low and moderate income people were largely excluded from membership in the agency's board, violating federal laws. The suit asks to stop the agency until it changes the governing board composition. The federal law requires the agency board to have a majority of consumers who are broadly representative of the social, economic, linguistic, and racial population of the area. ACORN alleges that 33 of the 41 consumer representatives on the board have annual incomes exceeding $15,000, while the median annual income in the area is less than $10,000. ACORN says 80% of the board members have family incomes more than $15,000, 12% have incomes of $10,000 to $15,000, and 7.3% have incomes less than $10,000. ACORN alleges that 60% of the board should consist of people with family incomes of less than $10,000, if the board composition follows the pattern of area population. The suit also challenges the self-perpetuating method of board member selection. ACORN argues that the planning and vetoing of federal health projects in the area is a governmental function. The group says it violates federal law for a private organization to wield power without its directors being accountable to the population it serves. The ACORN suit includes as defendants the Secretary of the Department of Health, Education, and Welfare and Dr Floyd A. Norman, the regional health administrator of the Public Health Service.

CALIFORNIA: GROUP PRACTICE NOT MORE EFFICIENT. Group practice is not more efficient than solo practice in providing health care, according to a study by the University of California School of Public Health in Los Angeles.

IDAHO: LIMITATIONS ON MALPRACTICE AWARD UPHELD. The Idaho Supreme Court has reversed a lower court's decision that the state's malpractice law is unconstitutional. In September 1976, a state district court had said the law's $150,000 limitation on malpractice awards violated a provision of the state constitution. On Oct 15, 1976, the Supreme Court said that such a limitation would be constitutional if the legislature had a rational basis for enacting such a law, specifically, if the malpractice situation in the state factually justified the limitation. The Supreme Court remanded the case to the district court for an additional hearing on the factual basis for enactment of the law. The case was brought by the Idaho Hospital and Medical Associations along with several physicians and hospitals. The state law enacted in March 1975 was the first legislation to limit on malpractice awards.

CONTINUING EDUCATION COURSES

JANUARY

Basic Sciences: Pharmacology

Title: Drug Interaction
Sponsor: UT Health Science Center at Houston
Date: Jan 16, 1977
Duration: Continuous; 4 hours instruction
Designed For: General practitioners
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Malignant Disease

Title: Dedication of Charles A. Sammons Cancer Center
Sponsors: Baylor University Medical Center, Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: Baylor University Medical Center, Dallas
Dates: Jan 14-15, 1977
Duration: 8 hours instruction Friday; 4 (non-credit) hours Saturday; 12 total course hours
Designed For: General practitioners; Specialists
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, seminar
Contact: James L. Matthews, Associate Dean, A. Webb Roberts Center for Continuing Education, Baylor University Medical Center, 3500 Gaston Ave, Dallas 75246

Obstetrics & Gynecology

Title: Diseases of the Vulva and Vagina
Sponsor: Baylor College of Medicine, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Jan 13-15, 1977
Duration: Continuous; 8 hours instruction per day
Fee: $250
Designed For: General practitioners; Specialists
Enrollment: Minimum, 100; Maximum, 300
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Title: Scientific Basis of Current Obstetric & Gynecologic Practice
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Jan 27-Feb 2, 1977
Duration: 6 hours per day; 41 total course hours
Fee: $350
Designed For: Specialists in Obstetrics & Gynecology
Enrollment: Maximum, 150
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, seminar
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Ophthalmology

Title: Phacoemulsification Course
Sponsor: Baylor College of Medicine
Dates: January 1977; repeated April 1977
Duration: 8 hours per day; 3 days; 24 total course hours
Designed For: Specialists in Ophthalmology
Enrollment: Maximum, 15
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, bedside rounds, clinical conference, enrollee performs procedure, laboratory work, programmed instruction, lecture, open question, operative human surgery, patient demonstration, television
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Pathology

Title: Augmentation of Pathology Instruction in Pharmacy, Nursing, and Allied Health Programs
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Jan 4-5, 1977
Duration: Continuous
Fee: $60
Designed For: Specialists in Pathology
Enrollment: Maximum, 65
Teaching Methods: Audiovisual materials, lecture, open question, seminar
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Psychiatry

Title: Violence and Aggression: A Perspective
Sponsors: Texas Tech University School of Medicine, Department of Psychiatry; American Psychiatric Association
Location of Course: Hilton Inn, El Paso
Dates: Jan 20-22, 1977
Duration: Approximately 5½ hours per day; 16 total course hours
Fee: $165; Spouse, TTUSM faculty, student, $30
Designed For: Specialists in Psychiatry
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award

Teaching Methods: Audiovisual materials, lecture, open question
Contact: Roy C. Allen, EdD, Acting Director, Continuing Education, Texas Tech University School of Medicine, Box 4569, Lubbock 79409

Title: Colloquium in Psychological Diagnosis
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Jan 29-30, 1977
Duration: 6 hours Saturday; 5 hours Sunday; 11 total course hours
Fee: $75
Designed For: Specialists in Psychiatry, Psychology
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, enrollee performs procedure, open question, patient demonstration, television
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Radiology and Radioisotopes

Title: External Beam, Interstitial, and Intracavitary Dosimetry—Principles
Sponsors: UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute
Location of Course: UT Health Science Center at Houston
Dates: Jan 3-14, 1977; Repeated July 5-15, 1977
Duration: Continuous; 8 hours instruction per day; 10 days; 80 total course hours
Fee: $350
Designed For: Specialists in Radiotherapy; Physicists
Teaching Methods: Enrollee performs procedure, laboratory work, lecture
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: External Beam, Interstitial, and Intracavitary Dosimetry—Manual and Computer Methods of Calculation
Sponsors: UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute
Location of Course: UT Health Science Center at Houston
Dates: Jan 17-28, 1977; Repeated July 18-29, 1977
Duration: Continuous; 8 hours instruction per day; 10 days; 80 total course hours
Fee: $350
Designed For: Specialists in Radiotherapy, Dosimetry; Physicists
Teaching Methods: Enrollee performs procedure, laboratory work, lecture
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: Diagnostic Radiology for Practicing Radiologists
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Jan 19-21, 1977
Duration: Continuous; 7 hours per day; 20 total course hours
Fee: $155
Designed For: Specialists in Radiology
Enrollment: Minimum, 15; Maximum, 90
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

FEBRUARY

Arthritis and Rheumatism

Title: Current Methods of Diagnosis and Treatment of Arthritis and Rheumatic Diseases
Location of Course: Marriott Motor Hotel, Houston
Date: Feb 5, 1977
Duration: 6 total course hours
Credit: Category I, AMA Physician's Recognition Award
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Chest Disease

Title: Practical Workshop in Pulmonary Disease
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Feb 18-20, 1977
Duration: Continuous; 17 total course hours
Fee: Laboratory session (Feb 18), $40; Clinical sessions (Feb 19-20), $110; Complete workshop, $150
Designed For: General practitioners
Enrollment: Laboratory session: Maximum, 50. Clinical sessions: Maximum, 120
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Lecture, open question, seminar
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Family Practice

Title: Seminar on Pediatric Care
Sponsor: East Texas Chapter, Texas Academy of Family Practice
Location of Course: Science Hall, Panola Junior College, Carthage

Date: Feb 2, 1977
Duration: Postgraduate traineeship; 6 hours instruction
Fee: $25
Designed For: General practitioners; Specialists
Enrollment: Maximum, 75
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Matthew J. Buchele, MD, Box R, San Augustine 75972

Title: Medical Update, 1977
Sponsor: First District Medical Society, El Paso
Location of Course: Pecos Country Club, El Paso
Date: Feb 5, 1977
Duration: 1 day; 7 total course hours
Fee: $25 (includes lunch)
Designed For: General practitioners
Credit: AAFP
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Laurance N. Nickey, MD, 1515 N Oregon St, El Paso 79902

Title: Family Practice Review
Sponsor: UT Medical Branch, Galveston
Location of Course: Galvez Hotel, Galveston
Dates: Feb 6-12, 1977
Duration: Continuous; 8 am-5 pm; 48 total course hours
Fee: $125
Designed For: General practitioners; Specialists
Enrollment: Minimum, 75; Maximum, 110
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel, seminar, television, live clinic
Contact: NeKee McNulty, Assistant Director, Continuing Education, UT Medical Branch, Galveston 77550

Title: Office Management of Hypertension
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Feb 9-March 30, 1977
Duration: 7:30-9 pm; Wednesdays; 10 total course hours
Fee: $35
Designed For: General practitioners; Specialists
Enrollment: Minimum, 10
Credit: AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Title: Diagnostic and Therapeutic Advances in Clinical Neurology
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Feb 11-12, 1977
Duration: Continuous; 10 total course hours
Fee: $75
Designed For: General practitioners; Specialists
Enrollment: Minimum, 15; Maximum, 50
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, patient demonstration, television
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Gastroenterology

Title: Pathophysiological Basis of Digestive Disease Therapy
Sponsor: American College of Physicians
Location of Course: Scott and White Hospital, Temple
Dates: Feb 10-12, 1977
Duration: Continuous; 8:30 am-5:30 pm Thursday; 8:30 am-5:30 pm Friday; 8:30 am-12:30 pm Saturday
Fee: ACP Members, FACP, Residents, Fellows, $100; Nonmembers, $150; ACP Associates, $50
Designed For: Specialists in Gastroenterology, Internal Medicine; Surgeons with special interest in Digestive Diseases
Enrollment: Minimum, 50; Maximum, 150
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, television, live clinic
Contact: N.C. Hightower, MD, Director, Research and Education, Scott and White Hospital, 2401 S 31st St, Temple 76501

Internal Medicine

Title: Course on Critical Care Medicine
Sponsor: Baylor College of Medicine, Houston
Location of Course: Jesse Jones Library Auditorium, Houston; Methodist Hospital Auditorium, Houston
Dates: Feb 10-12, 1977
Duration: Continuous; 24 total course hours
Fee: $200
Designed For: General practitioners; Specialists in Internal Medicine
Enrollment: Maximum, 125
Credit: AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Title: New Attitudes and Treatment of Hypertension
Sponsor: UT Health Science Center at Houston
Date: Feb 17, 1977
Duration: 1 day
Fee: To be announced
Designed For: General practitioners; Specialists in Internal Medicine
Credit: AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Medical Writing

Title: Medical and Technical Writing
Sponsor: UT Health Science Center at Houston
Location of Course: UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute, Houston
Date: February 1977
Teaching Methods: Lecture
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Ophthalmology

Title: Advanced Course in Ophthalmic Microsurgery
Sponsors: Girard and Associates: Louis J. Girard, MD; Rowland S. Hawkins, MD
Location of Course: Twelve Oaks Hospital, Houston
Dates: Feb 17-19, 1977; Repeated April 14-16, 1977; July 21-23, 1977; Nov 17-19, 1977
Duration: Continuous; 8 hours instruction per day; 24 total course hours
Fee: $650
Designed For: Specialists in Ophthalmology
Enrollment: Minimum, 8; Maximum, 20
Teaching Methods: Audiovisual materials, enrollee performs procedure, lecture, open question, patient demonstration, seminar
Contact: Louis J. Girard, MD, Course Director, 4126 Southwest Freeway, Suite 500, Houston 77027

Title: Symposium on External Eye Disease
Sponsors: Department of Ophthalmology, UT Health Science Center at Houston; Texas Ophthalmological Association
Location of Course: Marriott Motor Hotel, Houston
Dates: Feb 18-19, 1977
Duration: 9 am-5 pm; 2 days; 13 total course hours
Fee: TOA members, no fee; Nonmembers, $100
Designed For: Specialists in Ophthalmology
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Richard S. Ruiz, MD, Chairman, Department of Ophthalmology, 1121 Hermann Professional Bldg, Houston 77030

Title: Annual Symposium of the San Antonio Ophthalmology and Otolaryngology Society
Sponsors: San Antonio Ophthalmology and Otolaryngology Society; UT Health Science Center at San Antonio
Location of Course: La Mansión Hotel, San Antonio
Date: Feb 26, 1977
Duration: Continuous; 7 total course hours
Fee: San Antonio Ophthalmology and Otolaryngology Society members, $45; Nonmembers, $50
Designed For: Specialists in Ophthalmology, Otolaryngology
Enrollment: Maximum, 175
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Otolaryngology

Title: The Voice Institute
Sponsors: Baylor College of Medicine, Houston; Methodist Hospital, Houston
Dates: Feb 17-18, 1977
Duration: Continuous
Fee: To be announced
Designed For: Specialists in Otolaryngology
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Pathology

Title: Occupational Pulmonary Disease and Carcinoma of the Lung
Sponsor: Baylor College of Medicine, Houston
Location of Course: Jesse Jones Library Building Auditorium, Houston
Dates: Feb 25-26, 1977
Duration: Continuous; 6 hours per day; 12 total course hours
Fee: $150
Designed For: General practitioners; Specialists in Pathology, Occupational Medicine, Public Health, Internal Medicine
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

INTRAV®

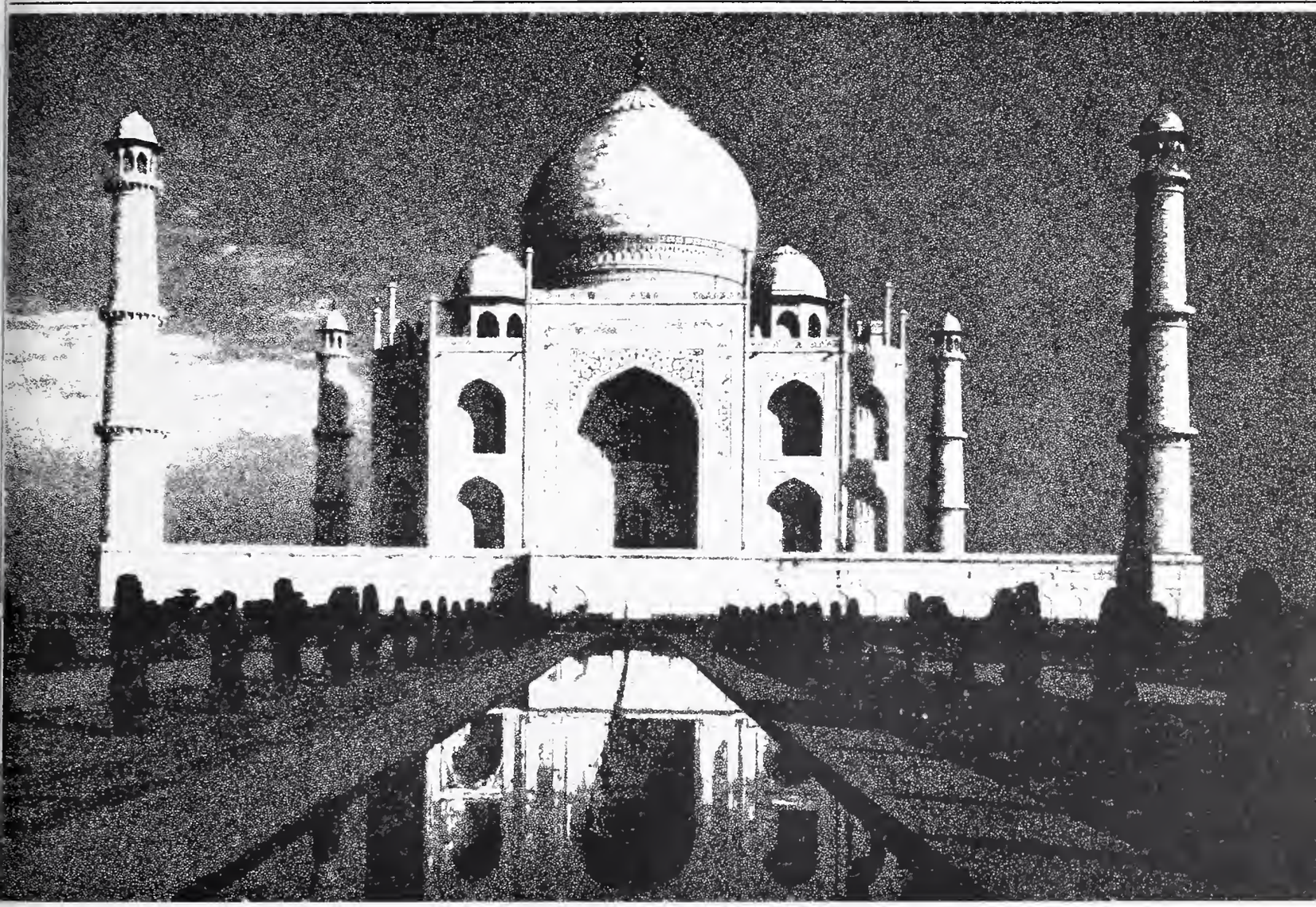
Around The World Adventure

The Ultimate Travel Experience. A 34 day trip to:
Tokyo, Hong Kong, New Delhi, Agra, Kabul, Cairo, Istanbul, Jerusalem, Tel Aviv, and London

Departing Dallas-Fort Worth and Houston on September 13, 1977

Here is a deluxe non-regimented trip that takes you to the exotic lands of the world. You'll circle the globe owing the sun with almost all daylight flights. You'll visit eight fascinating countries with time to unpack and relax.

Around The World Adventure . . . the most exciting and personally enriching travel experience of your lifetime . . . an outstanding quality trip for $4995. Don't miss it.



Send to: Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

Enclosed is my check for $ _____
($200 per person) as deposit

Name(s) _____
(LAST) (FIRST) (SPOUSE)

Home Address _____

City _____ State _____ Zip _____

A Non-Regimented INTRAV Deluxe Adventure

COMING MEETINGS

TEXAS MEDICAL ASSOCIATION

The Joe C. Thompson Conference Center in Austin is the site of Texas Medical Association's 1977 Winter Conference, An Update on Legislative Issues. The Conference, scheduled for Jan 14-16, 1977, will focus on medical care costs; Medicare, Medicaid and government-sponsored health care programs; the need for more residencies in family practice and in primary care; licensure of allied health personnel; nursing, nursing education, nurse practitioners and proposed amendments to the Nurse Practice Act; and other issues of current concern. A panel session on The Legislative Approach to Easing the Professional Liability Problem in Texas will begin at 3 pm Saturday, Jan 15, in the Auditorium of the Conference Center. The Medical Protective Company will sponsor a hospitality hour in the dining room of the Conference Center beginning at 5 pm Saturday afternoon.

Contact: C Lincoln Williston, Executive Director, 1801 N Lamar Blvd, Austin 78701

AMERICAN MEDICAL ASSOCIATION

The 73rd Congress on Medical Education will take place Jan 28-30, 1977, at the Palmer House in Chicago. Public regulation, educational freedom and professional responsibility are among the issues to be examined and discussed. There is a $5 registration fee for students, $10 for interns and residents, $25 for all others who register before Jan 14 and $30 for all others who register at the Congress. The registration fee does not include tickets for luncheons or banquets. The Congress is presented by the Council on Medical Education of the American Medical Association in collaboration with the Association for Hospital Medical Education, Federation of State Medical Boards of the United States, and Resident Physicians Section and Medical Student Business Session of the AMA.

Contact: Department of Meeting Services, American Medical Association, 535 N Dearborn St, Chicago 60610

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Vail Medical Ski Symposium, Vail, Colo, Jan 6-8, 1977. Sponsor: Albuquerque Academy of Family Physicians. 8 hours continuing education credit. Contact: Albuquerque Academy of Family Physicians, 2650 Yale Blvd, SE, Suite 105, Albuquerque, NM 87106.

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, 12th Annual Scientific Assembly, Diplomat Hotel, Hollywood, Fla, Jan 30-Feb 5, 1977. Program includes seminars and tutorials on cardiovascular disease, hypertension, cancer, infectious disease, cryosurgery, nutrition/alimentation, special medicine and surgery, genitourinary disease, pulmonary disease. 40 hours, Category I, AMA Physician's Recognition Award. Contact: Virginia Kendall, Sec, 30 N Michigan Ave, Chicago 60602.

NATIONAL ASTHMA CENTER, Keystone, Colo, Jan 31-Feb 4, 1977. Symposium stressing recent significant developments in immunology, allergy, asthma. Guest instructors from Duke University School of Medicine, Durham, NC; University of Colorado Medical Center, Denver; State University of New York at Buffalo; University of California at Los Angeles School of Medicine; Tulane University School of Medicine, New Orleans. Fee: $125; for physicians in training, $50. Contact: Hyman Chai, MD, National Asthma Center, 1999 Julian St, Denver 80204.

US VIRGIN ISLANDS MEDICAL SOCIETY, Second Mid-Winter Virgin Islands Clinical Conference, St Croix by the Sea Hotel, St Croix, VI. Lectures, seminars of interest to physicians in general practice, internal medicine, general surgery, obstetrics-gynecology, pediatrics. Registration limited. 14 hours, Category I, AMA Physician's Recognition Award. Presented in association with faculty, University of Pennsylvania School of Medicine. Contact: James S Glenn, MD, FACP, Chmn, US Virgin Islands Medical Society, Box 520, Christiansted, St Croix, US Virgin Islands 00820.

For other courses and symposiums, see Continuing Education Courses, pp 27-30.

JANUARY

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Vail, Colo, Jan 6-8, 1977. 2650 Yale Blvd, SE, Sulte 105, Albuquerque, NM 87106.

AMERICAN HEART ASSOCIATION, ARIZONA AFFILIATE, Scottsdale, Ariz, Jan 21-22, 1977. 1445 E Thomas Rd, Phoenix, Ariz 85014.

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Hollywood, Fla, Jan 30-Feb 5, 1977. Virginia Kendall, Sec, 30 N Michigan Ave, Chicago 60602.

AMERICAN SOCIETY OF CONTEMPORARY OPHTHALMOLOGY, Hollywood, Fla, Jan 30-Feb 5, 1977. John Bellows, MD, Dir, 6 N Michigan Ave, Suite 1110, Chicago 60602.

■ TEXAS MEDICAL ASSOCIATION, Winter Conference, Austin, Tex, Jan 14-16, 1977. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.

■ TEXAS SOCIETY OF PATHOLOGISTS, San Antonio, Tex, Jan 28-30, 1977. Frank M Townsend, Professor and Chairman of Pathology, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio, Tex 78284.

US VIRGIN ISLANDS MEDICAL SOCIETY, St Croix, VI, Jan 13-15, 1977. James S Glenn, MD, Chairman, US Virgin Islands Medical Society, Box 520, Christiansted, St Croix, US Virgin Islands 00820.

FEBRUARY

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Las Vegas, Nev, Feb 3-8, 1977. Charles V Heck-MD, Exec Dir, 430 N Michigan Ave, Chicago 60611.

AMERICAN COLLEGE OF CARDIOLOGY, Philadelphia, Feb 28-Mar 3, 1977. William D Nelligan, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN COLLEGE OF NUCLEAR PHYSICIANS, New Orleans, Feb 9-13, 1977. K Nicolas, 1730 Pennsylvania Ave NW, Suite 1150, Washington, DC 20006.

AMERICAN COLLEGE OF PSYCHIATRISTS, Atlanta, Feb 2-6, 1977. JC Nemiah, MD, Beth Israel Hospital, 330 Brookline Ave, Boston 02215.

AMERICAN COUNCIL OF MEDICAL STAFFS, Washington, DC, February, 1977. JL Garcia-Oller, MD, 3422 Bienville St, New Orleans 70119.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, New Orleans, Feb 6-9, 1977. BF Alfano, MD, Exec Sec, 675 Main St, Melrose, Mass 02176.

AMERICAN SOCIETY FOR SURGERY OF THE HAND, Las Vegas, Nev, Feb 1-3, 1977. JA Boswick, Jr, MD, Sec, University of Colorado Medical Center, 4200 E 9th Ave, Denver 80220.

ASPEN RADIOLOGY CONFERENCE, Aspen, Colo, Feb 28-Mar 4, 1977. Emanuel Salzman, MD, Conference Chairman, Division of Radiology, Beth Israel Hospital, Denver 80204.

■ EAST TEXAS CHAPTER, AMERICAN ACADEMY OF FAMILY PHYSICIANS, Carthage, Tex, Feb 27, 1977. WC Smith, MD, Program Chmn, 313 W Panola St, Carthage, Tex 75633.

■ FIRST DISTRICT MEDICAL SOCIETY, Pecos, Tex, Feb 7, 1977. LN Nickey, MD, 1515 N Oregon St, El Paso, Tex 79902.

INTERNATIONAL ACADEMY OF PROCTOLOGY, Kuala Lumpur, Singapore, Bali, Hong Kong and Taipei, Feb 17-Mar 7, 1977. Alfred J Cantor, MD, 96 Wildwood Rd, Great Neck, NY 11024.

TAOS MEDICAL SYMPOSIUM, Taos, NM, Feb 16-19, 1977. Thomas A Bodnar, Exec Dir, Albuquerque & Bernalillo County Medical Association, 2650 Yale Blvd SE #103, Albuquerque, NM 87106.

■ TEXAS PUBLIC HEALTH ASSOCIATION, Corpus Christi, Tex, Feb 27-Mar 2, 1977. Robert E Monroe, Exec Sec, 4107 Medical Parkway #201, Austin, Tex 78756.

MARCH

AMERICAN ACADEMY OF ALLERGY, New York, Mar 26-31, 1977. DL McNeil, Exec Dir, 225 E Michigan St, Milwaukee 53202.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Durango, Colo, Mar 18-19, 1977. 2650 Yale Blvd, SE, Suite 105, Albuquerque, NM 87106.

AMERICAN COLLEGE OF SURGEONS, Los Angeles, Mar 28-31, 1977. CR Hanlon, MD, Dir, 55 E Erie St, Chicago 60611.

AMERICAN MEDICAL ASSOCIATION NATIONAL CONFERENCE ON RURAL HEALTH, Seattle, Mar 30-Apr 1, 1977. AMA Department of Rural and Community Health, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL STUDENT ASSOCIATION, Chicago, Mar 30-Apr 3, 1977. LR Giancola, Exec Dir, 1171 Tower Rd, Schaumburg, Ill 60195.

■ AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS, Dallas, Mar 23-25, 1977. Mrs Elaine Galasso, Exec Sec, 1718 Gallagher Rd, Norristown, Pa 19401.

■ DALLAS SOUTHERN CLINICAL SOCIETY, Dallas, Mar 28-30, 1977. Robert L Heath, Exec Officer, 3630 Noble Ave, Dallas 75204.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, New Orleans, Mar 28-31, 1977. 1430 Tulane Ave, New Orleans 70112.

■ SOCIETY OF NUCLEAR MEDICINE, SOUTHWEST CHAPTER, El Paso, Tex, Mar 18-20, 1977. RJ Gorten, MD, 915 Strand, Galveston, Tex 77550.

SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, Little Rock, Ark, Mar 16-18, 1977. Exec Sec, 4300 N Lamar Blvd, Austin, Tex 78756.

■ TEXAS ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Houston, Mar 4-5, 1977. Iris Wenzel, 1801 N Lamar, Austin, Tex 78701.

■ TEXAS RADIOLOGICAL SOCIETY, Dallas, Mar 17-19, 1977. Iris Wenzel, 1801 N Lamar, Austin, Tex 78701.

■ UT SYSTEM MD ANDERSON HOSPITAL AND TUMOR INSTITUTE, Symposium on Fundamental Cancer Research, Houston, Mar 2-4, 1977. Stephen C Stuyck, MD, MD Anderson Hospital and Tumor Institute, Houston 77030.

■ VALLEY CHAPTER, TEXAS ACADEMY OF FAMILY PHYSICIANS, McAllen, Tex. Mar 31-Apr 2, 1977. CE Barrera, MD, 606 S Broadway, McAllen, Tex 78501.

APRIL

AMERICAN ACADEMY OF NEUROLOGY, Atlanta, Apr 25-30, 1977. Stanley A Nelson, Exec Dir, 4015 W 65th, Suite 302A, Minneapolis 55435.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Toronto, Apr 18-20, 1977. WT Maloney, 6 Beacon St, Suite 620, Boston 02108.

AMERICAN COLLEGE HEALTH ASSOCIATION, Philadelphia, Apr 19-22, 1977. James W Dilley, Exec Dir, 2807 Central, Evanston, Ill 60201.

■ AMERICAN COLLEGE OF PHYSICIANS, Dallas, Apr 18-21, 1977. EC Rosenow, Exec Vice-pres, 4200 Pine St, Philadelphia 19104.

■ AMERICAN COLLEGE OF RADIOLOGY, Houston, Apr 17-22, 1977. WC Stronach, Exec Dir, 20 N Wacker Dr, Chicago 60606.

AMERICAN GERIATRICS SOCIETY, San Francisco, Apr 13-14, 1977. 10 Columbus Circle, New York 10019.

AMERICAN OCCUPATIONAL MEDICAL ASSOCIATION, Boston, Apr 24-28, 1977. Howard N Schulz, Exec Dir, 150 N Wacker Dr, Chicago 60606.

AMERICAN PEDIATRIC SOCIETY, San Francisco, Apr 25-29, 1977. David Goldring, MD, Sec, 500 S Kingshighway, St Louis 63110.

AMERICAN UROLOGICAL ASSOCIATION, INC, Chicago, Apr 24-28, 1977. Richard J Hannigan, Exec Officer, 1120 N Charles St, Baltimore 21201.

ARKANSAS MEDICAL SOCIETY, Little Rock, Apr 24-27, 1977. CC Long, MD, Exec Vice-pres, 214 N 12th, Box 1208, Fort Smith, Ark 72901.

■ CHILDREN'S HOSPITAL, SANTA ROSA MEDICAL CENTER, Location to be announced, Apr 30-May 1, 1977. Howard A Britton, Medical Director, Children's Hospital, Santa Rosa Medical Center, San Antonio, Tex 78285.

SOCIETY OF TEACHERS OF FAMILY MEDICINE, New Orleans, Apr 17-20, 1977. Ms PL Plhak, Exec Dir, 1740 W 92nd St, Kansas City, Mo 64114.

SOUTHEASTERN SURGICAL CONGRESS, Bal Harbour, Fla, Apr 3-7, 1977. AH Letton, MD, Sec-Dir, 315 Boulevard NE, Suite 500, Atlanta 30312.

■ SOUTHWEST ALLERGY FORUM, Lakeway Inn, Austin, Tex, Apr 30-May 4, 1977. Theo S Painter, Jr, MD, Suite 107, Medical Park Tower, Austin, Tex 78705.

■ ST LUKE'S EPISCOPAL HOSPITAL/BAYLOR COLLEGE OF MEDICINE, 13th Annual Orthopedic Symposium, Houston, Apr 1-2, 1977. Alexander E Brodsky, MD, 505 Medical Towers Bldg, Houston 77025.

■ TEXAS SOCIETY OF CHILD PSYCHIATRY, San Antonio, Tex, Apr 1-2, 1977. Alberto C Serrano, MD, Pres, 2135 Babcock Rd, San Antonio, Tex 78229.

■ TEXAS SURGICAL SOCIETY, Galveston, Tex, April, 1977. Robb H Rutledge, Sec, 901 S Lake St, Fort Worth, Tex 76104.

■ TEXAS UROLOGIC SOCIETY, Laredo, Tex, Apr 15-16, 1977. Carlos H Mata, MD, Sec-Treas, 1012 Santa Ursula, Laredo, Tex 78040.

■ TRAVIS CLINIC FOUNDATION, Jacksonville, Tex, April, 1977. James H Pesnell, Box 870, Jacksonville, Tex 75766.

MAY

■ AMERICAN MEDICAL STUDENT ASSOCIATION-UT MEDICAL BRANCH NATIONAL STUDENT RESEARCH FORUM, Galveston, Tex, May 4-7, 1977. Room 209, Libbie Moody Thompson Basic Sciences Building, UT Medical Branch, Galveston, Tex 77550.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, San Antonio, Tex, May 19-22, 1977. Geraldine Midgley, Box 1287, Uvalde, Tex 78801.

■ NORTH TEXAS CHAPTER, AMERICAN COLLEGE OF SURGEONS, Dallas, May, 1977. Felix P Peppard, MD, FACS, Sec-Treas, 3600 Gaston, Dallas 75246.

■ TEXAS AIR-MEDICS ASSOCIATION, Houston, May 12, 1977. CF Miller, MD, Box 1338, Waco, Tex 76703.

■ TEXAS DERMATOLOGICAL SOCIETY, Houston, May 14-15, 1977. William F Spiller, MD, Sec, 5000 Montrose, Houston 77006.

■ TEXAS DIABETES ASSOCIATION, Houston, May 13, 1977. Eric A Orzeck, MD, 7800 Fannin, Houston 77054.

■ **TEXAS MEDICAL ASSOCIATION, Annual Session, Houston, May 11-15, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.**

■ TEXAS OCCUPATIONAL MEDICAL ASSOCIATION, Houston, May 12, 1977. Frank J Kelly, MD, Box 647, Amarillo, Tex 79604.

■ TEXAS OPHTHALMOLOGICAL ASSOCIATION, Houston, May, 1977. CA Struve, MD, Pres-elect, Box 6374, Corpus Christi, Tex 78411.

JUNE

■ TEXAS HEART INSTITUTE, Houston, Jun 2-4, 1977. Mrs Verna Dewees, Sec to Medical Director, Box 20269, Houston 77025.

AMERICAN MEDICAL ASSOCIATION, Annual Convention, San Francisco, Jun 18-23, 1977. James H Sammons, MD, Exec Vice-pres, 535 N Dearborn St, Chicago 60610.

Starlite Village Hospital

Center Point, Texas

Ph.: 634-2212
634-2213

- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

CHAMPUS APPROVED
JCAH: ACCREDITED.

Which iron would you rather be using this weekend?

An investment in a large piece of land requires time and experience to make it a wise and profitable venture. Time and experience that you may not have. For 16 years, Chaparrosa Agri-Service has profitably run a 70,000 acre Texas ranch. And Chaparrosa Agri-Service is noted for management in international ranching operations.

Complete management. Experience. Expertise. For a fee, Chaparrosa Agri-Service can ensure your investment is well protected. For a brochure describing our complete Agri-Service Program, phone or write:
Dudley T. Campbell, President
2000 NBC Building, San Antonio, Texas 78291 (512) 227-5101

J3 Chaparrosa Agri-Service

2000M

Wichita Falls Clinic

501 Midwestern Parkway East, Wichita Falls, Texas 76302

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Clark W. Brazil, M.D.

GENERAL THORACIC AND VASCULAR SURGERY
Cecil H. Meares, M.D.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
David G. Borman, M.D., F.A.C.S.
Richard H. Moore, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOLOGY AND RADIOACTIVE ISOTOPES
Thomas K. Bose, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
Joseph Bilder, Jr., M.D.
George W. Slaughter, M.D.

INTERNAL MEDICINE
P. K. Smith, M.D., F.A.C.P.
I. L. Humphrey, Jr., M.D.
Preston McCall, M.D.
Julian C. Sleeper, M.D., Cardiology
David M. Pogue, M.D., Cardiology
Wendell I. Wyatt, M.D.
Lowell L. Harvey, M.D.

FAMILY PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
James T. Cook, M.D.
Madeleine Kent, M.D.

UROLOGY
John C. Wurster, M.D.

OBSTETRICS AND GYNECOLOGY
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
James M. Missler, Administrator

Bank Financing for Physicians

We specialize in equipment leasing and financing, unsecured loans and lines of credit to Physicians And we handle it all by mail.

Unsecured loans with optional dollar amounts (to $10,000), optional payment schedules. Equipment leasing to give you tax advantages, restore operating capital, convert unused depreciation to cash. And lines of credit to provide for future cash needs.

We charge tax deductible bank rates. You won't spend any of your valuable time at your bank, and you'll reserve your regular bank credit for times when you really need it.

For further information, complete and mail this coupon today. I want to know more about:

_ Unsecured Loans
_ A Line of Credit
_ Equipment Leasing
_ Sale & Lease Back Plans
_ Lease-Purchase Plans
_ Equipment Financing
_ Other: _____

Dr. _____ Phone _____
Address _____
City _____ State _____ Zip _____

Professional Services Division
TEXAS BANK AND TRUST COMPANY
P. O. Box 101 Jacksonville, Texas 75766

contains no aspirin

tablets

Darvocet-N® 100

100 mg. Darvon-N® (propoxyphene napsylate)
650 mg. acetaminophen

Lilly

Additional information available to the profession on request.
Eli Lilly and Company, Inc.
Indianapolis, Indiana 46206

700043

Sex and the preschooler

Guy S. Parcel, PhD

The concept of sexuality generally accepted today is that described by Anna Freud:

> "The sexual instincts of man do not suddenly awaken between the thirteenth and fifteenth year, ie, at puberty, but operate from the onset of the child's development, change gradually from one form to another, progress from one state to another, until at last adult sexual life is achieved as the final result from this long series of developments."

In spite of considerable data that support the viewpoint of sexual development throughout the life cycle, the myth remains in our society that sexuality begins at puberty and ends at menopause. A poor understanding of the nature of childhood sexual development may cause problems not only for the child but also for parents, teachers, and other professionals who work with children.

Two actual examples illustrate this latter point. The first example was related to a pediatrics resident, and the second led to an inservice workshop on childhood sexual development for child care workers and teachers.

A teacher called the pediatrics resident for advice about a "problem" that had occurred that day. During the afternoon's activity on the playground, two 3-year-olds, a boy and a girl, wandered away from the group. The teacher found them underneath one of the playground structures. According to the teacher: "There they were with all their clothes off. The girl was lying on the ground with the little boy lying on top of her. I was so shocked that I didn't know what to do. The first thing that came to my mind was to tell them to get their clothes on and go over and play with the rest of the boys and girls."

The second example involved children in a day care center. An aide entered the restroom and discovered a boy and girl engaged in oral-genital play. The aide was very upset by the behavior and, in turn, upset other staff personnel at the center. Before things settled down, the incident snowballed into a conference with the children's parents and led to considerable discussion and confusion at the center.

These examples raise several questions. Are they cases of extreme behavior in preschool children? Are children really sexual? Do adults tend to interpret children's behavior in terms of adult sexuality? What is "normal" sexual development for a preschooler?

Although the research on childhood sexuality is limited, there is sufficient information in the literature to answer these and numerous other questions concerning sex and the preschooler. The purpose of this article is to present information concerning childhood sexual development and to suggest some possible roles for physicians in sex education for children and parents. A development framework is used starting with infancy, 0-18 months; then early childhood, 18 months to 3 years; and preschool, 3 to 5 years of age.

Infancy

Early evidence of sexual response is well known to obstetricians. Male babies will develop erections at birth and females will develop vaginal lubrication while still in the delivery room. Masters has suggested that the response may actually begin before birth; someday an x-ray may accidentally document a male fetus with an erection.

Infants begin to find and seek pleasure in touching their genitals about the time they develop sufficient muscular coordination. Boys discover their genitals earlier

than girls do. Parents' reactions to these discoveries can be very interesting: Little Johnny lies in his crib and, through random arm movements, he discovers that he has an ear. He pulls on it, rubs it, and because it feels good he is likely to repeat the behavior. The next day over coffee, his mother might say, "Hey, Johnny discovered his ear and he is having a great time playing with it." Johnny may also discover his penis, and when he rubs it and pulls on it, it feels good and because it feels good he is likely to repeat that behavior. However, will his mother react the same as she did to his discovery of his ear? Some parents would react to such infant behavior in an accepting manner, while others would react with punitive or nonaccepting responses.

As early as infancy, parents' behavior affects the psychosexual development of the child. Parents have behavior expectations even before the child is born. In our society adults relate differently to male and female children. From birth parents react to the infant according to their definition of his or her gender. There are differences in social-economic groups, but in general, boys are expected to be active and aggressive and girls are to be passive and seductive. Parents and other adults, through nonverbal communication, begin to reinforce the infant's behavior according to masculine and feminine expectations.

Other sexual attitudes and behaviors are being developed during infancy. Sucking, nestling, rocking, and other cutaneous or kinesthetic stroking behaviors are important to adult sexual behavior. The infant can learn to experience and enjoy these behaviors, or learn not to expect these behaviors and not to find them satisfying. It is not uncommon to find an absence of these behaviors in adults seeking sexual therapy.

Early Childhood

Although the next period of life, 18 months to 3 years, is frequently referred to as the "anal stage," toilet training and anal stimulation are probably not the most important activities at this stage of life. During this stage, gender identity is being established; self-concepts are being formed; and attitudes about sexuality are being developed. The age of 18 months to 3 years seems to be a critical period in this regard, and parental expectation and interaction with the child are extremely important. Broderick, a family sociologist who has done extensive research on childhood sexuality, suggests three primary conditions for normal heterosexual development: *First,* the parent or parent surrogate of the same sex must not be so punishing on the one hand or so weak on the other hand as to make it impossible for the child to identify with the parent of the same sex. *Second,* the parent or parent surrogate of the opposite sex must not be so seductive, or so punishing, or so emotionally erratic as to make it impossible for the child to trust members of the opposite sex. *Third,* the parents or parent surrogates must not systematically reject the child's biological sex and attempt to teach cross-sex role behavior.[1]

Language development is an important area during early childhood. Sexual attitudes of the parents are communicated to the child through the use and nonuse of language. Boys and girls receive verbal reinforcement for expected masculine and feminine behavior. For example, if a little boy falls down and skins his knees, we might hear: "Hey, big boys don't cry. Be tough like a man." However, if a little girl falls down: "Oh, you poor thing. Come here and let daddy make it better."

Children begin to learn names for things (eye, ear, nose, elbow) and words for behaviors (eating, sleeping, drinking) but, what kind of vocabulary do children in our culture typically learn in regard to sexual or genital characteristics and behaviors? Parents tend to avoid using sexual labels, but, instead say, "wee wee" for penis, "tee tee" for urination, and "dirty" for defeca-

tion. In fact, in some families, correct terminology is so difficult to handle that parents make up a coding system, for instance, "Do you have to go number one or number two?"

This is also a stage of active exploration and children are exploring everything, including their own bodies. Toilet training and increased ability to remove their own clothing makes genital fondling more accessible. Also, active masturbation may begin during this stage. Children may learn now that it is good and pleasurable to explore, to touch and stroke, or they may learn that it is bad. Mom and Dad may not appreciate their child's newly discovered pleasures, and because of their own discomfort they will attempt to stop, and in some cases even punish, early childhood sexual play. These experiences will carry on through the children's future development and they may or may not learn how to feel good about sensual pleasures.

Preschool Years

The early childhood years can be characterized as a period of self-exploration and the next stage, the preschool years, ages 3-5, can be characterized as a period of immense curiosity and a time for the exploration of others. Preschool children are curious about everything, including things of a sexual nature. Early curiosity is often directed toward seeking an understanding of the differences between girls and boys. For example, a 3-year-old girl became acutely aware of the difference between her and her brother. They were taking a bath together when her older brother stood up. She pointed and loudly asked, "What's that?" Her parents explained that was a penis.

"Why don't I have one?"

"Boys have a penis, but girls do not."

"Well, then what have I got?" A brief explanation of the female genitalia seemed to satisfy her curiosity.

Another child's curiosity was not so easily satisfied; after a discussion of why boys and men have a penis and girls and women do not, the male genital organ became his favorite topic for discussion at the dinner table:

"Do all daddies have a penis?"

"Yes."

"Daddy horses?"

"Yes."

"Daddy frogs, daddy cows, daddy sheep, daddy dogs, daddy fish???"

Also during this age range, children usually become curious about where babies come from. A study in New England, titled, "Teach Us What We Want To Know," indicated that young children have numerous unanswered questions related to basic information about reproduction. The stork story is dead for the most part, but children still are often confused by what they hear and see. In a study in which children were asked, "Where do babies come from?" one child stated, "Babies are found under cabbage plants," and another offered, "Babies come in little black bags that the doctor carries to the house." To illustrate early processes of sexual socialization, one little girl said, "You buy babies at the hospital and boy babies cost more than girl babies; that's why my mother had to pay more for my brother."

The preschool child's curiosity is expressed not only in questions, but also in looking and exploring. Activity and experimentation are the young child's primary modes of learning, and this is as true in the sexual area as in any other. This is the time of playing doctor and nurse, or "You show me what you've got and I'll show you what I've got." To the children these games are just ways of having fun, but many parents feel uncomfortable and embarrassed, and find it difficult to deal with their child's explorations.

Sexual experimentation among children is a normal part of social sexual development. The more important consideration is not the behavior, but rather adult response to the behavior. Adults have difficulty ac-

cepting children's sexual behavior because they tend to see it in terms of adult sexuality. Sociologists Simon and Gagnon believe that guilt is a major outcome of adult response to childhood sexual behavior:

> "Despite our present capacity as a society to generate high levels of public discourse about sexual matters, it is probably not unreasonable to assert that learning about sex in our society is learning about guilt; conversely, learning how to manage sexuality constitutes learning how to manage guilt. An important source of guilt is the imputation by adults of sexual capacities or qualities in children that children may not have, but that result in—however imperfectly—children learning to act as if they had such capacities or qualities."[2]

The informed, understanding parent has an opportunity to help children develop positive attitudes toward sexuality and toward themselves as sexual beings.

Sex Education and Physician's Role

The debate over sex education in the schools continues, but little attention is given to the sex education needs of preschool children. These needs can be identified easily by examining the interrelated developmental sequences of childhood. Sexual development does not occur in isolation and need not be separated from other developmental tasks of the child. Conversely, anyone interested in the total development of the child should be concerned with cognitive and social learning affecting sexual development.

Young children's developmental needs related to sexuality include self-acceptance and development of a positive self-concept. During adolescence and adulthood, there is a close tie between feelings of sexual adequacy and feelings of self-esteem. Attitudes toward self begin at a young age and result from reinforcement and nonreinforcement by parents and other adults. Also, infants and young children need to experience satisfying behaviors such as nestling, touching, and stroking that will be incorporated into adult sexual behavior. Children need a vocabulary for "sex language" that enables them to talk about their body parts and functions. An understanding of biological male/female differences and reinforcement of individual adequacy is another important need for the preschool child.

The preschooler needs information about pregnancy and birth that is appropriate for his or her level of cognitive development. One study has demonstrated that children's concepts concerning the origin of babies follow a developmental sequence and are related to levels of cognitive development:

> "At Level 1, children are preformist and, in essence, do not see the need for a 'cause' of babies. In Level 2, the causes are assimilated from notions of people as manufacturers. Children at Level 3 isolate two or three main factors: social; sexual; and biological; but do not coordinate them in a true system. With advent of concrete operations, children at Level 4 do coordinate the variables in a system of physical causes but fail to come to grips with genetic transmission. Level 5 children are quite familiar with genetic transmission but conceptualize it as additive rather than interactive. . . . Finally, at Level 6, children provide a reasonably sophisticated scientific theory of how people get babies."[3]

Preschoolers would normally fall into level 1 or 2. The implications of this research are that when we provide information about reproduction, we first need to find out the child's level of conceptualization. The level of understanding reported by the preschooler is not necessarily low because he has been given the wrong information; rather, his explanation reflects how he interprets the information. Therefore, the child should be given information that is only one level above his current level

of conceptualization. There is no need to go to higher levels until the child first moves on to the next level. For example, a child at level 1 assumes that babies have always existed. The next level of understanding would be that babies come from mothers, and it would be inappropriate to start talking about the sperm and the egg at this point.

Learning related to childhood sexual development occurs primarily within the social unit of the family. Physicians can play an important role in helping parents to understand and accept childhood sexuality as a part of normal development. During well-child care, physicians can provide guidance concerning anticipated sexual development along with other developmental expectations. In addition, physicians can assist parents in feeling comfortable with their own sexuality so that they can communicate positive attitudes to their children.

The number of children attending child care centers and early childhood learning centers has been increasing. Thus, the unit for socialization and learning is extending to secondary groups. This trend provides an opportunity for physicians interested in child development to work with teachers and child care workers concerning an understanding of childhood sexual development. It may also be possible to reach groups of parents through child care centers.

The data base concerning childhood sexual development is sufficient to provide guidance for parents and other adults who care for children. Child health care personnel and educators need to become more familiar with this information. The objective is not to consider sexual development as a separate entity, but rather to relate it to the other areas of child development that already concern health care providers and educators.

The period of childhood is crucial not because of what happens of a sexual nature, but because of the nonsexual developments that will provide the meanings and values that will condition subsequent sexuality and sexual behavior.[2]

References

1. Broderick CB: Sexual behavior among preadolescents. J Social Issues 22:6-21, 1966.
2. Simon W, Gagnon JH: On Psychosexual development, in: Grummon DL, Barclay AM, Eds: Sexuality: a search for perspective. New York, Von Nostrand Reinhold Co, 1971.
3. Berstein AC, Cowan PA: Children's concepts of how people get babies. Child Dev 46:77-91, 1975.

Guy S. Parcel, PhD, Assistant Professor of Pediatrics and Preventive Medicine and Community Health, School Health Programs, The University of Texas Medical Branch, Galveston, TX 77550.

Fetal monitoring

Angel Werch, MD; Clark M. Hinkley, MD; Raymond B. Wait, MD

During the past decade considerable interest has developed in evaluating and monitoring the fetus *in utero*. This interest has produced a large volume of information on the environment, homeostasis, and maturation of the unborn. Also, some of the intrauterine fetal dangers have been clarified.

From a mechanical and nutritional viewpoint, the fetus of the normal pregnancy is well protected *in utero;* nevertheless, the fetus does face significant stress during labor when powerful uterine contractions diminish or temporarily eliminate the flow of oxygenated blood into the intervillous space. It is at this time that a fetus with poor intrauterine environment (high-risk pregnancy) will demonstrate this deficit either by changes in fetal heart rate or by the passage of meconium. In some severely compromised pregnancies (for example, those complicated by diabetes, hypertension, or severe toxemia), the oxygen available to the fetus is so deficient that death *in utero* may occur before labor. Monitoring of the fetus during both the antepartum and intrapartum periods has become an important part of daily obstetrics.

For many years, intermittent recording of the fetal heart rate with the obstetrical stethoscope and the detection of meconium in the amniotic fluid were the only indices for diagnosing intrapartum fetal distress. With improvement in electronic recording techniques, it is now possible to obtain a continuous record of fetal heart rate simultaneously with uterine activity. Various patterns of deceleration (bradycardia) have been correlated with uterine contractions to determine the nature of any change in the fetal heart rate. At the same time, techniques for measuring the pH of a fetal scalp blood sampling (Saling technique) have considerably improved our ability to diagnose fetal distress *in utero.*

Techniques

Biochemical Monitoring

Biochemical monitoring using the Saling technique is done by serially evaluating fetal blood pH, carbon dioxide pressure, and oxygen pressure. It is of value only when the patient is in labor, and it requires a certain degree of cervical dilation and ruptured amniotic membranes. A conical endoscope is introduced through the cervix and applied firmly against the presenting part of the fetus, the head or buttocks. The skin is cleansed with a cotton swab and sprayed with ethylchloride to produce hyperemia. A small incision is made with a 2-mm blade. A drop of blood immediately appears at the site and is collected into a capillary glass tube that has been previously heparinized. The sample is taken to the laboratory where appropriate determinations are done. If the blood sample is sealed immediately it can be stored at room temperature for approximately 30 minutes without any significant change in pH. Serial collection of fetal blood samples during labor has shown that a fetal pH is stable in the absence of any complication until shortly before delivery when it tends to fall.[1]

Values obtained in this manner have shown that a pH ranging between 7.20 and 7.30 is acceptable as normal.[2-4] When babies are born in poor condition, fetal scalp blood taken within 30 minutes of

---

This comprehensive review article was prepared for *Texas Medicine* through the cooperation of Fred M. Taylor, MD, director, Office of Continuing Education, Baylor College of Medicine, Houston.

birth usually has a low pH. The closer to delivery one collects the sample, the better the correlation with the Apgar score.

Wood and associates presented significant data correlating fetal blood pH and final outcome. In their work, fetal blood pH measurement was more accurate in determining fetal prognosis than were clinical criteria of fetal distress. Only one in five patients with clinical fetal distress had a low fetal pH, and those patients with a normal fetal pH were successfully managed conservatively. In their series of 400 cases, there were four fetal pH values of less than 7.10 within hours of death *in utero*.[5]

Although his technique of fetal blood sampling is widely known, Saling emphasized the possibility of error.[6] According to his report, erroneous determinations are associated with poor calibration of equipment, caput succedaneum, prolonged exposure of blood sample to air, or extended storage causing auto-oxidation.

Kubli[7] reported a case of severe fetal hemorrhage from the site of the incision in a neonate with hemolytic disease and a coagulation disorder. Other rarely encountered complications have been cellulitis and scalp abscess at the site of incision.

Fetal blood sampling has found widespread acceptance in many countries, especially in New Zealand and Australia and throughout Europe. It is employed routinely in many clinics in West Germany for intensive fetal surveillance. In this country, scalp blood sampling is coming into broader usage to corroborate the finding of fetal distress when first diagnosed with electronic monitoring.

Electronic Monitoring

For many decades the attending physician could only rely on the obstetrical stethoscope to count the fetal heart rate periodically through the mother's abdominal wall. In most instances, that rate is checked for 1 minute every 15 minutes, leaving the fetus unmonitored for 56 minutes out of every hour. Furthermore, as stated by Hon, the stethoscope can detect only the extreme instances of fetal distress, pronounced bradycardia, or significant tachycardia.

In the past, it was thought that the fetal heart rate slowed down normally during uterine contractions. The development of electronic continuous monitoring has shown that this is not so. This kind of monitoring allows for a continuous study of the infant during the uterine contraction (maximal fetal stress) and during uterine relaxation (minimal stress), a time when early signs of fetal distress may become apparent.

The basic equipment needed for monitoring includes a silver-silver spiral electrode and an open-end plastic catheter. This catheter is passed into the uterine cavity, between the cervix and the presenting part. The electrode is attached to the fetal scalp and provides continuous information on the heart rate and fetal ECG complex. In cases of breech presentation, the electrode is attached to the fetal buttocks. Both the electrode and catheter are affixed to a plate strapped to the mother's leg and to a strain gauge, respectively. All the information is then displayed on a bedside monitoring unit. Naturally, some cervical dilatation is needed in order to introduce the catheter, and the amniotic sac should be ruptured in order to attach the electrode to the presenting part. By observing the relationship between the uterine contraction and fetal heart rate, Hon established three different patterns: early, late, and variable deceleration (bradycardia).

The only pattern associated with significant fetal hypoxia is late deceleration. Characteristic of this pattern is that the fetal heart rate becomes bradycardiac, usually at the peak of the uterine contractions, reaches its greatest amplitude 10 to 40 seconds after this peak, and returns to within normal range gradually and after the corresponding uterine contraction has ceased. This type of fetal heart rate pattern is considered a manifestation of fetal hypoxia.

Caldeyro-Barcia and associates,[8] in 1967, reported that reduction in feto-maternal exchange is the primary phenomennon that causes type II dips (late deceleration) along with fetal hypoxia and acidosis. The fact that these dips may be modified by atropine implies that stimulation of the vagal system is involved. Caldeyro-Barcia and coworkers suggest that when the fetal blood oxygen pressure reaches a level of 10 to 20 mm Hg, vagus stimulation occurs and the fetal heart rate pattern of late deceleration is manifested. Furthermore, low oxygen concentration has a direct depressant effect on the myocardium and may diminish beat-to-beat variation.

Early decelerations (Caldeyro-Barcia, type I) occur simultaneously with contractions reaching their greatest amplitude with the peak of the contraction and returning rapidly to the baseline heart rate. Usually the heart rate does not fall below 100 beats per minute and the duration is less than 90 seconds. Neither maternal hypoxia nor fetal biochemical change seems to have any effect on their occurrence. Atropine effectively blocks the bradycardia. Early deceleration is seen in cases of head compression and represents a vagal response to pressure.

Variable decelerations are not necessarily synchronous with the contractions, nor are they consistently related to them. They may be deep (below 80 beats per minute) or mild (above 100 beats per minute) and may last from a few seconds to 60 to 90 seconds. This pattern of variable deceleration, commonly seen in the labor room, is associated with umbilical cord compression and generally disappears after changing the position of the patient. It should be stressed that severe or recurrent variable decelerations may produce hypoxic fetal myocardial depression and late deceleration may follow. Studies by Kubli and others[3] indicate a strong correlation between the ominous fetal heart rate patterns and fetal acid-base status. In the presence of a normal heart rate and good variability there is a virtual absence of acid-base disturbance. There is clearly a place for studying the continuous heart rate as a screening process for fetal asphyxia and then using the fetal pH for confirming or rejecting the diagnosis.

Another area of considerable interest is the use of equipment that does not require cervical dilatation or ruptured membranes to collect data (noninvasive technique). To record the fetal heart rate, several methods have been tried extensively. A fetal ECG is difficult to obtain by applying electrodes to the mother's abdomen, the main problem being that the fetal signal is of very low voltage and there is considerable interference with the maternal signal. Another modality is the use of an abdominal microphone that selectively picks up heart sounds of high frequency. The signal obtained is printed out as a rate. Disadvantages associated with the use of a microphone are the need for constant adjustment of the receiver and distortion of the signal caused by the patient moving in bed.

In this country, the most commonly used monitoring device is ultrasound. The beam

produced by the transmitter detects fetal heart pulsations and returns in the form of a signal. The signal is then fed into a rate-meter and a recording of heart rate can be obtained or the signal can be made audible. This system is also subject to disturbance by the patient's movement or by excessive fetal activity.

For information on uterine activity, a pressure transducer strapped to the abdominal wall will detect relative changes in the tension of the wall at the time of uterine contractions. Although this method does not record intrauterine pressure, an indication of the onset and end of the contraction is provided, which is all that is required to assess the significance of fetal heart rate changes.

Beat-to-Beat Variability

Minor irregularities in beat-to-beat rate reflect the constant interaction of both parasympathetic and sympathetic systems. The interaction causes minor irregularities in the normal human fetal heart rate. Investigators have shown that a fixed heart rate is present with significant problems of the nervous system, for example, patients in coma.[9] Poor beat-to-beat fluctuations and a smooth fetal heart rate have been observed in cases of fetal immaturity, administrat on of depressing drugs to the mother, and fetal asphyxia.

It is important, when evaluating fetal distress, to consider not only the periodic changes occurring to the fetal heart rate concomitant with the contraction, but also the amount of fetal heart rate variability.

Oxytocin Challenge Test

It is well established that uterine contractions cause intermittent decrease in intervillous space blood flow and therefore diminish oxygen transferred from the mother to the fetus.[10] Utilizing this principle, the oxytocin challenge test, also known as oxytocin stress test or posse test, had been devised for the antepartum diagnosis of fetal distress. The equipment needed is the same as for noninvasive external monitoring. Most of the available equipment on the market has a noninvasive monitoring capability where only abdominal sensors are applied to the mother. The fetal heart rate and uterine activity are simultaneously recorded and observed for 10 to 15 minutes. If the spontaneous contractions do not elicit late decelerations, oxytocin infusion is started at 0.5 milliunit (mU) per minute and doubled every 20 minutes if needed to induce uterine contractions at the rate of three per 10-minute interval. The infusion is maintained for 30 minutes, and if no late decelerations are noted it is concluded that there is a reasonable placental reserve and that the fetus can tolerate labor or induction. This is called a negative test. Freeman[11] stated that the negative test done on a weekly basis is reassuring and dependable, even in the face of other signs of uteroplacental insufficiency, in order to avoid unnecessary premature delivery. A positive test, on the other hand, indicates a loss of uteroplacental respiratory reserve and calls for immediate action.

There has been no evidence that the oxytocin challenge test contributes to premature labor or other fetal or maternal morbidity.

Complications Associated with Internal Electronic Monitoring

The most common and major fetal complication is the development of a scalp ab-

scess. In a study by Plavidal and Werch[12] the incidence was 1:230 monitored labors or 0.43%. All infants responded well to drainage, local care, and systemic antibiotics. Two cases of osteomyelitis of the skull of the newborn have been reported; the electrode site was thought to be responsible.

Other less common complications include perforation of the uterine cavity with the plastic catheter (asymptomatic) or infection with herpesvirus hominis type II at the monitor probe site. In one case, drainage of cerebrospinal fluid occurred through the wound produced by the electrode. Regarding maternal morbidity, our studies and those of others have shown that endometritis was rare and that postpartum febrile morbidity could not be attributed directly to the technique used for intrapartum monitoring.

References

1. Beard RW, Simons EG: Diagnosis of foetal asphyxia in labour. Br J Anaesth 43:874-885, 1971.

2. Bretscher J, Saling E: pH values in the human fetus during labor. Am J Obstet Gynecol 97:906-911, 1967.

3. Kubli FW, Hon EH, Khazin AF, et al: Observations on heart rate and pH in the human fetus during labor. Am J Obstet Gynecol 104:1190-1206, 1969.

4. Beard RW, Morris ED: Foetal and maternal acid-base balance during normal labour. J Obstet Gynaecol Br Commonw 72:496-506, 1965.

5. Wood C, Newman W, Lumley J, et al: Classification of fetal heart rate in relation to fetal scalp blood measurements and Apgar score. Am J Obstet Gynecol 105: 942-948, 1969.

6. Saling EZ: Possible errors in fetal blood analysis and their prevention. In Gluck L (Ed): Modern perinatal medicine. Chicago, Year Book Medical Publishers, 1974, p 149.

7. Kubli F, Berg D, Kohnlein G, et al: Microanalysis of foetal blood. A critical study of the method. Ger Med Mon 12:315-327, 1967.

8. Caldeyro-Barcia R, Casacuberta C, Bustos R, et al: Correlation of intrapartum changes in fetal rate with fetal blood oxygen and acid-base state. In Adamsons K (Ed): Diagnosis and treatment of fetal disorders. New York, Springer-Verlag, 1968, pp 205-225.

9. Vallbona C, Cardus D, Spencer WA, et al: Patterns of sinus arrhythmia in patients with lesions of the central nervous system. Am J Cardiol 16:379-389, 1965.

10. Ramsey EM: Uteroplacental circulation during labor. Cline Obstet Gynecol 11:78-95, 1968.

11. Freeman RK: The clinical value of antepartum fetal heart rate monitoring. In Gluck L (Ed): Modern perinatal medicine. Chicago, Year Book Publishers, 1974, p 163.

12. Plavidal F, Werch A: Fetal scalp abscess secondary to monitoring. Am J Obstet Gynecol, 125:65-70, 1976.

The authors, Department of Obstetrics and Gynecology, Baylor College of Medicine, Houston, TX 77030.

Neurological manifestations of systemic lupus erythematosus

Richard C. Senelick, MD

Neurological complications are encountered in 25-75% of all cases of systemic lupus erythematosus. Seizures and psychiatric disturbances occur in 30-50% of patients while other neurological problems occur in fewer cases. Laboratory diagnostic studies are discussed and a review of the current treatment of central nervous system lupus erythematosus is presented. The frequent complications of steroid and immunosuppressive therapy are stressed.

Systemic lupus erythematosus (SLE) a disease with widespread systemic manifestations, frequently affects the nervous system wherein involvement may be as protean in its manifestations as central nervous system lues. Kaposi[1] performed the first autopsy study and reported the association of disturbed cerebral function. Osler[2] made a comprehensive study of the systemic nature of the disease and described hemiplegia and delirium. Libman and Sacks[3] in 1924 reported convulsions and paralysis, postulating the occurrence of emboli from endocardial lesions. Jarcho in 1936 described temporary blindness following convulsions in SLE[4] and in 1941 Klemper and associates reported visual disturbance with or without retinal lesions in SLE.[5] Subsequently, Cluxton and Krause in 1943[6] described toxic delirium manifested by confusion, disorientation, restlessness, and irritability. A number of excellent reviews have appeared.[7-19]

The incidence of neurologic involvement in SLE varies from series to series. In a series of 138 cases of SLE reviewed by Harvey and Tumulty in 1954,[14] 37% of patients had neurologic manifestations. Bailey and Clark[7] reported 28% of their 130 cases had neurologic symptoms. Glaser[12] reported a 30% incidence, O'Connor and Musher 32%,[17] and Johnson and Richardson[15] reported that 75% of their patients had significant neurologic involvement. Estes and Christian, in a prospective analysis of SLE, reported a 59% incidence of neurologic manifestations.[20]

SLE may attack any part of the nervous system and involvement may be intracranial, involving the cortex and brain stem, or extracranial, involving the spinal cord, nerve roots, and peripheral nerves. Reported manifestations include seizures, hemiparesis, subarachnoid hemorrhage, psychosis, delirium, cranial nerve palsies, myelitis, peripheral neuropathy, movement disorders, increased intracranial pressure, aphasia, hallucinations, vertigo, and myasthenia gravis. Each of these will be considered separately.

Clinical Manifestations

Seizures

The general incidence of seizures is approximately 30% although Johnson and Richardson[15] reported a 54% incidence in their series. Seizures may occur as an initial or terminal event. Most seizures develop shortly before death, and status epilepticus in patients with SLE has been reported frequently. The development of seizures does not in itself carry a poor prognosis in SLE, and in the prospective study by Estes[20] a history of seizures did not significantly affect survival.

The occurrence of seizures many years before systemic symptoms develop raises the question as to the real relationship between seizures and SLE. The seizure may be coincidental in the same patient, it may be a part of the primary disease process; or the lupus syndrome may be secondary to the administration of anticonvulsants. There have been numerous reports of lupus

syndromes following the use of diphenylhydantoin, primidone, and trimethadione. Likewise, steroid therapy can lower the seizure threshold in a predisposed patient and increase cerebral excitability. However, a definite correlation has never been shown between the incidence of seizures and high-dose steroid therapy. Similarly the use of anticonvulsants to treat seizures in SLE has not been shown to influence the course of the disease adversely.

Hemiparesis

Hemiparesis occurs in approximately 5% of patients with SLE. Although hemiparesis may be a terminal event, it occurs frequently in intermediate stages of the disease. Recurrent hemiparesis, either ipsilateral or contralateral, has been reported with complete resolution of the deficits. Such cases are thought to be secondary to reversible cerebral arteritis resulting in focal cerebritis. Permanent hemiparesis with associated sensory, visual, and speech difficulties occurs in the distribution of major cerebral vessels. Cerebral angiography may reveal occlusion or narrowing, or both, of the internal carotid, middle cerebral, and other large or medium-size arteries.[22] Large and small hemorrhagic infarctions and intracerebral hemorrhages account for many cases of hemiplegia. Asymptomatic cerebral microinfarcts have been demonstrated throughout the cerebral cortex, white matter, and brain stem.

Spinal Cord Involvement

Paraparesis and transverse myelitis are unusual neurologic complications of SLE. Transverse myelitis usually has a poor prognosis for recovery although Granger[23] reports an interesting case of transverse myelitis with laboratory evidence of SLE in which full recovery followed the use of chloroquine.

The pathologic changes in transverse myelitis are variable. In Bailey's two cases, extensive degeneration of the dorsal columns and posterior root ganglion without significant vascular changes were found.[24] Johnson and Richardson[15] reported demyelination and disruption of axis cylinders in the posterior, lateral, and ventral horns with preservation of the anterior and posterior roots in one case. In the same case, some thickening of the adventitia of the small arteries and veins, without vessel occlusion, was noted in the area of degeneration. The lesions are reminiscent of subacute combined degeneration.

Brain Stem and Cranial Nerve Involvement

Brain stem involvement is less frequent than cortical involvement, but more frequent than spinal cord or peripheral nerve involvement.[25] Extraocular muscle and pupillary abnormalities occur most frequently. Blindness and homonymous hemianopsia, presumably caused by cerebral lesions, have been reported. Involvement of the trigeminal, abducens, facial, acoustic, glossopharyngeal, and vagus nerves at various levels, most often in the brain stem, have been described. Ashworth and Tait[26] report trigeminal neuropathy in five patients with SLE. Cranial nerve palsies are usually accompanied by other signs of brain stem dysfunction such as internuclear ophthalmoplegia, pyramidal tract signs, nystagmus, and cerebellar signs. Neuropathological studies have uniformly shown microinfarcts and other vascular lesions within the brain stem.

Chorea

The choreiform movements in SLE do not differ from those in idiopathic or Sydenham's chorea.[27] Lesions in such cases are not uniformly found in the basal ganglia, although several case reports have correlated chorea with vascular occlusion and infarction in the lenticular nuclei. The central nervous system changes are similar to

those described in Sydenham's chorea with an extensive and diffuse arteritis.

Peripheral Neuropathy

Peripheral neuropathy may present as either mononeuropathy multiplex or symmetrical polyneuropathy.[24,28-30] Polyneuropathy in SLE presents usually as a symmetrical distal motor and sensory loss, although others have reported a predominant motor loss with a picture resembling the Guillain-Barré syndrome. The mononeuropathies include brachial plexus palsy, ulnar nerve palsy, bilateral wrist drop, bilateral sciatic paralysis, and peroneal nerve palsies. Postmortem studies show areas of demyelination in peripheral nerves, posterior columns, and in anterior and posterior roots. Fibrinoid degeneration has also been reported in the leptomeningeal vessels along with perivascular infiltrates and loss axis cylinders. Myasthenia gravis may occur with SLE.[31]

Increased Intracranial Pressure

Increased intracranial pressure without focal neurologic signs has been the subject of several recent reports.[32-34] The use of the term "pseudotumor cerebri" seems to be a misnomer when one can identify SLE as the underlying etiology. Increased intracranial pressure may be the presenting symptom in SLE. The four patients reported by Silberberg and Laties responded well to steroid therapy with resolution of their papilledema. Results of neuropathologic studies are not available, although abnormalities seen on electroencephalograms separate this group of patients from those with pseudotumor cerebri. Numerous ophthalmological manifestations, which should not be confused with papilledema, have been reported. These consist primarily of "cytoid bodies" (cotton-wool spots; actually microinfarcts in the retinal nerve fiber layer with axonal swelling), superficial flame-shaped hemorrhages, hypertensive retinopathy usually secondary to renal disease, and sheathing of retinal vessels. Optic atrophy, retinal detachment, and central vein occlusion have also been reported. Visual hallucinations similar to those seen in migraine are probably due to occipital lobe involvement.[35]

Disturbances of Mental Function

Disturbances in mental function are about as frequent as seizures or perhaps even more so.[36,37] In a series of 150 patients reported by Estes, 42% had disorders of mental function. Acute delirium with disorientation, disturbances of attention, delusions, hallucinations, and often excessive motor activity and paranoia are common. O'Connor found evidence of psychosis in 21 of 40 unselected patients with SLE. Sergent and coworkers[51] recently reported 28 patients with 52 episodes of neuropsychiatric disease in SLE. Fourteen patients had 15 episodes of psychosis. This was most frequently manifested by psychotic depressive reaction with suicidal thoughts. Several mechanisms have been postulated to include a prepsychotic personality, toxic effects of SLE, cerebral lesions, and side effect of steroid therapy. Pathologic studies have not helped in the clinical correlation of psychosis and SLE. Steroids are usually administered in doses of greater than 100 mg per day and are known to cause psychosis at this level. However, patients with SLE receiving steroid therapy have a higher incidence of psychosis than other steroid-treated patients. Sergent and coworkers recommended the use of psychotropic drugs when indicated and a gradual reduction in the dose of prednisone.

Laboratory Data

Cerebrospinal Fluid: Examination of spinal fluid usually produces results within normal limits although the findings are unpredictable. The protein level may be elevated

and there may be albuminocytologic dissociation as in Guillain-Barré syndrome. In aseptic meningitis, pleocytosis is frequently noted.[38] A decrease in the fourth component of complement and IgG has been noted.[39-41] A single recording of either of these may not be diagnostic but it serves as a baseline for followup. Petz and associates believe that cerebrospinal fluid C4 is a reliable indicator of the activity of central nervous system lupus and helps to differentiate other central nervous system disorders.[41]

Electroencephalogram

The electroencephalogram is generally of little diagnostic or localizing value. The most frequent finding has been bilateral slowing or diffusely disorganized activity. Epileptiform activity may be seen in patients with seizures.

Brain Scan

Serial brain scans have been reported to be helpful in following the course of central nervous system lupus.[42] During times of focal neurologic deficit it is not unusual for the brain scan to be abnormal and for the abnormalities to shift from side to side. The abnormalities are thought to represent focal areas of cerebritis or vasculitis, or both. Caution has been recommended in interpretation of these data in light of recent reports of intracerebral lymphomas in patients receiving immunosuppressive therapy for SLE.[43-45]

Angiography

With episodes of hemiplegia and major neurologic deficits, stenosis or total occlusion of major intracerebral arteries may be demonstrated.[22] Asymptomatic patients may reveal irregular narrowing alternating with dilatation, giving a beaded effect to the small intracerebral vessels.[46] These findings are nonspecific and are seen in all forms of cerebral arteritis. Angiography may be helpful in differentiating mass lesions from areas of cerebritis.

Neuropathology

There is no single typical pathognomonic lesion in the brain comparable to the "wire-loop" lesion of the kidney. Though it is agreed that the abnormality is mainly vascular in origin, the exact nature of the lesion is still far from clear. In most cases the small arteries and arterioles are involved more than the large and medium-size arteries.[15,47] Lesions usually include endothelial or subendothelial proliferation, hyalinization or fibrinoid degeneration, and thickening of the vessel wall with secondary thrombosis and partial or complete occlusion of the vessel. Perivascular inflammatory exudates are reported with less frequency. Surrounding parenchymal lesions vary from encephalomalacia, hemorrhagic infarction, and cystic degeneration to gliosis, depending on the size of the vessel involved. Johnson and Richardson[15] demonstrated microinfarcts in small hemorrhages in 20 of their 24 autopsy cases of central nervous system lupus. The small vessel changes in SLE are somewhat akin to the changes found in hypertensive encephalopathy, thrombotic thrombocytopenic purpura, acute rheumatic fever, and serum sickness. Changes within the vessel walls are not accompanied by inflammatory cells within the vessel walls and therefore cannot be classified as vasculitis in the usual sense. Both spinal cord and peripheral nerve manifestations of SLE are difficult to explain on the basis of vascular changes. It is possible that immunological disease and indeed immune complexes have been demonstrated in the choroid plexus of the brain.[48]

Treatment

The use of systemic steroids and immunosuppressive agents for neurologic manifes-

tations of SLE is an area of great controversy.[18,49-54] Although other manifestations of the disease may clearly respond to systemic steroids, the evidence for similar treatment of the neurologic manifestations is not so clear. Recent data do not confirm an impression of the efficacy of corticosteroid therapy for central nervous system disease in SLE. Both retrospective and prospective studies have demonstrated that isolated seizures and psychosis do not affect five-year survival rates.[45,54] Patients with organic brain syndromes and focal neurologic disease have a five-year survival of approximately 40-50%. Many patients are no longer dying of SLE but of the side effects of prolonged high doses of steroids or immunosuppressive drugs. Overwhelming sepsis, osteonecrosis of the femoral heads, diabetes mellitus, myopathy, hypertension, fungal infections, herpes zoster, and Cushing's syndrome are not unusual complications of long-term steroid therapy. A review of current data reveals an increase in side effects when dosages of greater than 100 mg per day are given. The use of immunosuppressive agents (cyclophosphamide and azathioprine) is associated with both minor and life-threatening complications.[43-45,55-57] Hair loss and hemorrhagic cystitis are common with cyclophosphamide. Both cyclophosphamide and azathioprine are associated with an increased incidence of infection and neoplasia. Tuberculosis and fungal infections may disseminate and more exotic infections such as cytomegalovirus and *Pneumocystis carinii* are more common in treated patients. An increased incidence of reticulum cell sarcoma, particularly within the central nervous system, has been reported with both drugs.

Adequate treatment does not exist for central nervous system lupus, and indeed the care of patients with this disease is increasingly becoming the management of complications of steroid and immunosuppressive therapy.

References

1. Kaposi M: Neue Beitrage zur Kenntnis des Lupus erythematosus. Arch Dermat U Syph 4:36-78, 1872.

2. Osler W: On the visceral complication of erythema exudativum multiforme. Am J Med Sci 110:629-646, 1895.

3. Libman E, Sacks B: A hitherto undescribed form of valvular and mural endocarditis. Arch Intern Med 33:701-737, 1924.

4. Jarcho S: Lupus erythematosus associated with visceral vascular lesions; series of autopsied cases. Bull John Hopkins Hosp 59:262-273, 1936.

5. Klemperer P, Pollack AD, Baehr G: Pathology of disseminated lupus erythematosus. Arch Pathol 32:569-631, 1941.

6. Cluxton HE Jr, Krause LA: Acute lupus erythematosus disseminatus. Ann Intern Med 19:543-872, 1943.

7. Clark EC, Bailey AA: Neurological and psychiatric signs associated with systemic lupus erythematosus. JAMA 160:455-457, 1956.

8. Bennett R, Hughes GR, Bywaters EG, et al: Neuropsychiatric problems in systemic lupus erythematosus. Br Med J 4:342-345, 1972.

9. Clark EC, Yoss RE: Nervous system findings associated with systemic lupus erythematosus. Minn Med 39:517-520, 1956.

10. Daly D: Central nervous system in acute disseminated lupus erythematosus. J Nerv Ment Dis 102:461-465, 1945.

11. Decker JL, Steinberg AD, Gershwin ME, et al: Systemic lupus erythematosus. Contrasts and comparisons. Ann Intern Med 82 (3):391-404, 1975.

12. Glaser GH: Lesions of central nervous system in disseminated lupus erythematosus. AMA Arch Neurol Psychiat 67:745-753, 1952.

13. Glaser GH: Neurologic manifestations in collagen diseases; problems of prognosis and treatment. Neurology 5:751-766, 1955.

14. Harvey AM, Shulman LE, Tumulty PA, et al: Systemic lupus erythematosus: review of literature and clinical analysis of 138 cases. Medicine 33:291-437, 1954.

15. Johnson RT, Richardson EP: The neurological manifestations of systemic lupus erythematosus. Medicine 47:337-369, 1968.

16. Malamud N, Saver G: Neuropathologic findings in disseminated lupus erythematosus. AMA Arch Neurol Psychiat 71:723-731, 1954.

17. O'Connor JF, Musher DM: Central nervous system involvement in systemic lupus erythematosus. A study of 150 cases. Arch Neurol (Chicago) 14:157-164, 1966.

18. Fulton WH, Dyken PR: Neurological syndromes of systemic lupus erythematosus. Neurology (Minneap) 14:317-323, 1964.

19. Siekert RG, Clark EC: Neurologic signs and symptoms as early manifestations of systemic lupus erythematosus. Neurology 5:84-88, 1955.

20. Estes D, Christian CL: The natural history of systemic lupus erythematosus by prospective analysis. Medicine (Baltimore) 50:85-95, 1971.

21. Benton JW, Tynes B, Register HB Jr, et al: Systemic lupus erythematosus occurring during anticonvulsive drug therapy. JAMA 180:115-118, 1962.

22. Trevor RP, Sondheimer FK, Fessel WJ, et al: Angiographic demonstration of major cerebral vessel occlusion in systemic lupus erythematosus. Neuroradiology 4:202-207, 1972.

23. Granger DP: Transverse myelitis with recovery: the only manifestation of systemic lupus erythematosus. Neurology (Minneap) 10:325-329, 1960.

24. Bailey AA, Sayre GP, Clark EC: Neuritis associated with systemic lupus erythematosus; report of 5 cases with necropsy in 2. AMA Arch Neurol Phychiat 75:251-259, 1956.

25. Kulis JC, Trakas DA: Systemic lupus erythematosus with brainstem involvement. Neurology (Minneap) 15:878-879, 1965.

26. Ashworth B, Tait GB: Trigeminal neuropathy in connective tissue disease. Neurology 21:609-614, 1971.

27. Greenhouse AH: On chorea, lupus erythematosus, and cerebral arteritis. Arch Intern Med (Chicago) 117: 389-393, 1966.

28. Gargour G, MacGaffey K, Locke S, et al: Anterior radiculopathy and lupus erythematosus cells: report of a case. Br Med J 5412:799-801, 1964.

29. Lewis DC: Systemic lupus and polyneuropathy. Arch Intern Med (Chicago) 116:518-522, 1965.

30. Scheinberg L: Polyneuritis in systemic lupus erythematosus; review of literature and report of case. N Eng J Med 225:416-421, 1956.

31. Wolf SM, Barrows HS: Myasthenia gravis and systemic lupus erythematosus. Arch Neurol (Chicago) 14:254-258, 1966.

32. Bettman JW, Daroff RB, Sanders MD, et al: Papilledema and asymptomatic intracranial hypertension in systemic lupus erythematosus. A fluorescein angiographic study of resolving papilledema. Arch Ophthal 80:189-193, 1968.

33. Carlow TJ, Glaser JS: Pseudotumor cerebri syndrome in systemic lupus erythematosus. JAMA 228:197-200, 1974.

34. Silberberg DH, Laties AM: Increased intracranial pressure in disseminated lupus erythematosus. Arch Neurol 29:88-90, 1973.

35. Brandt KD, Lessell S, Cohen AS: Cerebral disorders of vision in systemic lupus erythematosus. Ann Intern Med 83(2):163-169, 1975.

36. Hanrahan GE: 3 cases of disseminated lupus erythematosus with psychosis. Canad M A J 71:374-377, 1954.

37. O'Connor JF: Psychoses associated with systemic lupus erythematosus. Ann Intern Med 51:526-536, 1959.

38. Canoso JJ, Cohen AS: Aseptic meningitis in systemic lupus erythematosus. Report of three cases. Arthritis Rheum 18(4):369-374, 1975.

39. Hadler NM, Gerwin RD, Frank MM, et al: The fourth component of complement in the cerebrospinal fluid in systemic lupus erythematosus. Arthritis Rheum 16:507-521, 1973.

40. Levin SA, Fudenberg HH, Petz LD, et al: IgG levels in cerebrospinal fluid of patients with central nervous system manifestations of systemic lupus erythematosus. Clin Immunol Immunopathol 1:1-5, 1972.

41. Petz LD, Sharp GC, Cooper NR, et al: Serum and cerebral spinal fluid complement and serum autoantibodies in systemic lupus erythematosus. Medicine (Baltimore) 50:259-275, 1971.

42. Bennahum DA, Messner RP, Shoop JD: Brain scan findings in central nervous system involvement by lupus erythematosus. Ann Intern Med 81(6):763-765, 1974.

43. Lipsmeyer EA: Development of malignant cerebral lymphoma in a patient with systemic lupus erythematosus treated with immunosuppression. Arthritis Rheum 15:183-186, 1972.

44. Uhl GS, Williams JE, Arnett FC: Intracerebral lymphoma in a patient with central nervous system lupus on cyclophosphamide. J Rheum 1:282-286, 1974.

45. Tannenbaum H, Schur PH: Development of reticulum cell sarcoma during cyclophosphamide therapy. Arthritis Rheum 17:15-18, 1974.

46. Ferris EJ, Levine HL: Cerebral arteritis: classification. Radiology 109:327-341, 1973.

47. Mintz G, Fraga A: Arteritis in systemic lupus erythematosus. Arch Intern Med (Chicago) 116:55-66, 1965.

48. Atkins CJ, Kondon JJ Jr, Quismorio FP, et al: The choroid plexus in systemic lupus erythematosus. Ann Intern Med 76:65-72, 1972.

49. Feng PH, Cheah PS, Lee YK: Mortality in systemic lupus erythematosus: a 10-year review. Br Med J 4:772-774, 1973.

50. Sergent JS, Lockshin MD: Editorial: Treatment of central nervous system lupus erythematosus. Ann Intern Med 80:413-414, 1974.

51. Sergent JS, Lockshin MD, Klempner MS, et al: Central nervous system disease in systemic lupus erythematosus. Therapy and prognosis. Am J Med 58(5): 644-654, 1975.

52. Feng PH, Jayaratnam FJ, Tock EP, et al: Cyclophosphamide in treatment of systemic lupus erythematosus: 7 years' experience. Br Med J 2:450-452, 1973.

53. Fries JF, Weyl S, Holman HR: Estimating prognosis in systemic lupus erythematosus. Am J Med 57(4):561-565, 1974.

54. Steinberg AD, Plotz PH, Wolf SM, et al: Cytotoxic drugs in treatment of nonmalignant diseases. Ann Intern Med 76:619-642, 1972.

55. Cammarata RJ, Rodman GP, Jensen WN: Systemic rheumatic disease and malignant lymphoma. Arch Intern Med (Chicago) 111:330-337, 1963.

56. Decker JL: Toxicity of immunosuppressive drugs in man. Arthritis Rheum 16:89-91, 1973.

57. Miller DG: The association of immune disease and malignant lymphoma. Ann Intern Med 66:507-521, 1967.

Richard C. Senelick, MD, Suite 1006, 343 West Houston, San Antonio, TX 78205.

Sex and the preschooler

Guy S. Parcel, PhD

The concept of sexuality generally accepted today is that described by Anna Freud:

> "The sexual instincts of man do not suddenly awaken between the thirteenth and fifteenth year, ie, at puberty, but operate from the onset of the child's development, change gradually from one form to another, progress from one state to another, until at last adult sexual life is achieved as the final result from this long series of developments."

In spite of considerable data that support the viewpoint of sexual development throughout the life cycle, the myth remains in our society that sexuality begins at puberty and ends at menopause. A poor understanding of the nature of childhood sexual development may cause problems not only for the child but also for parents, teachers, and other professionals who work with children.

Two actual examples illustrate this latter point. The first example was related to a pediatrics resident, and the second led to an inservice workshop on childhood sexual development for child care workers and teachers.

A teacher called the pediatrics resident for advice about a "problem" that had occurred that day. During the afternoon's activity on the playground, two 3-year-olds, a boy and a girl, wandered away from the group. The teacher found them underneath one of the playground structures. According to the teacher: "There they were with all their clothes off. The girl was lying on the ground with the little boy lying on top of her. I was so shocked that I didn't know what to do. The first thing that came to my mind was to tell them to get their clothes on and go over and play with the rest of the boys and girls."

The second example involved children in a day care center. An aide entered the restroom and discovered a boy and girl engaged in oral-genital play. The aide was very upset by the behavior and, in turn, upset other staff personnel at the center. Before things settled down, the incident snowballed into a conference with the children's parents and led to considerable discussion and confusion at the center.

These examples raise several questions. Are they cases of extreme behavior in preschool children? Are children really sexual? Do adults tend to interpret children's behavior in terms of adult sexuality? What is "normal" sexual development for a preschooler?

Although the research on childhood sexuality is limited, there is sufficient information in the literature to answer these and numerous other questions concerning sex and the preschooler. The purpose of this article is to present information concerning childhood sexual development and to suggest some possible roles for physicians in sex education for children and parents. A development framework is used starting with infancy, 0-18 months; then early childhood, 18 months to 3 years; and preschool, 3 to 5 years of age.

Infancy

Early evidence of sexual response is well known to obstetricians. Male babies will develop erections at birth and females will develop vaginal lubrication while still in the delivery room. Masters has suggested that the response may actually begin before birth; someday an x-ray may accidentally document a male fetus with an erection.

Infants begin to find and seek pleasure in touching their genitals about the time they develop sufficient muscular coordination. Boys discover their genitals earlier

than girls do. Parents' reactions to these discoveries can be very interesting: Little Johnny lies in his crib and, through random arm movements, he discovers that he has an ear. He pulls on it, rubs it, and because it feels good he is likely to repeat the behavior. The next day over coffee, his mother might say, "Hey, Johnny discovered his ear and he is having a great time playing with it." Johnny may also discover his penis, and when he rubs it and pulls on it, it feels good and because it feels good he is likely to repeat that behavior. However, will his mother react the same as she did to his discovery of his ear? Some parents would react to such infant behavior in an accepting manner, while others would react with punitive or nonaccepting responses.

As early as infancy, parents' behavior affects the psychosexual development of the child. Parents have behavior expectations even before the child is born. In our society adults relate differently to male and female children. From birth parents react to the infant according to their definition of his or her gender. There are differences in social-economic groups, but in general, boys are expected to be active and aggressive and girls are to be passive and seductive. Parents and other adults, through nonverbal communication, begin to reinforce the infant's behavior according to masculine and feminine expectations.

Other sexual attitudes and behaviors are being developed during infancy. Sucking, nestling, rocking, and other cutaneous or kinesthetic stroking behaviors are important to adult sexual behavior. The infant can learn to experience and enjoy these behaviors, or learn not to expect these behaviors and not to find them satisfying. It is not uncommon to find an absence of these behaviors in adults seeking sexual therapy.

Early Childhood

Although the next period of life, 18 months to 3 years, is frequently referred to as the "anal stage," toilet training and anal stimulation are probably not the most important activities at this stage of life. During this stage, gender identity is being established; self-concepts are being formed; and attitudes about sexuality are being developed. The age of 18 months to 3 years seems to be a critical period in this regard, and parental expectation and interaction with the child are extremely important. Broderick, a family sociologist who has done extensive research on childhood sexuality, suggests three primary conditions for normal heterosexual development: *First,* the parent or parent surrogate of the same sex must not be so punishing on the one hand or so weak on the other hand as to make it impossible for the child to identify with the parent of the same sex. *Second,* the parent or parent surrogate of the opposite sex must not be so seductive, or so punishing, or so emotionally erratic as to make it impossible for the child to trust members of the opposite sex. *Third,* the parents or parent surrogates must not systematically reject the child's biological sex and attempt to teach cross-sex role behavior.[1]

Language development is an important area during early childhood. Sexual attitudes of the parents are communicated to the child through the use and nonuse of language. Boys and girls receive verbal reinforcement for expected masculine and feminine behavior. For example, if a little boy falls down and skins his knees, we might hear: "Hey, big boys don't cry. Be tough like a man." However, if a little girl falls down: "Oh, you poor thing. Come here and let daddy make it better."

Children begin to learn names for things (eye, ear, nose, elbow) and words for behaviors (eating, sleeping, drinking) but, what kind of vocabulary do children in our culture typically learn in regard to sexual or genital characteristics and behaviors? Parents tend to avoid using sexual labels, but, instead say, "wee wee" for penis, "tee tee" for urination, and "dirty" for defeca-

tion. In fact, in some families, correct terminology is so difficult to handle that parents make up a coding system, for instance, "Do you have to go number one or number two?"

This is also a stage of active exploration and children are exploring everything, including their own bodies. Toilet training and increased ability to remove their own clothing makes genital fondling more accessible. Also, active masturbation may begin during this stage. Children may learn now that it is good and pleasurable to explore, to touch and stroke, or they may learn that it is bad. Mom and Dad may not appreciate their child's newly discovered pleasures, and because of their own discomfort they will attempt to stop, and in some cases even punish, early childhood sexual play. These experiences will carry on through the children's future development and they may or may not learn how to feel good about sensual pleasures.

Preschool Years

The early childhood years can be characterized as a period of self-exploration and the next stage, the preschool years, ages 3-5, can be characterized as a period of immense curiosity and a time for the exploration of others. Preschool children are curious about everything, including things of a sexual nature. Early curiosity is often directed toward seeking an understanding of the differences between girls and boys. For example, a 3-year-old girl became acutely aware of the difference between her and her brother. They were taking a bath together when her older brother stood up. She pointed and loudly asked, "What's that?" Her parents explained that was a penis.

"Why don't I have one?"

"Boys have a penis, but girls do not."

"Well, then what have I got?" A brief explanation of the female genitalia seemed to satisfy her curiosity.

Another child's curiosity was not so easily satisfied; after a discussion of why boys and men have a penis and girls and women do not, the male genital organ became his favorite topic for discussion at the dinner table:

"Do all daddies have a penis?"

"Yes."

"Daddy horses?"

"Yes."

"Daddy frogs, daddy cows, daddy sheep, daddy dogs, daddy fish???"

Also during this age range, children usually become curious about where babies come from. A study in New England, titled, "Teach Us What We Want To Know," indicated that young children have numerous unanswered questions related to basic information about reproduction. The stork story is dead for the most part, but children still are often confused by what they hear and see. In a study in which children were asked, "Where do babies come from?" one child stated, "Babies are found under cabbage plants," and another offered, "Babies come in little black bags that the doctor carries to the house." To illustrate early processes of sexual socialization, one little girl said, "You buy babies at the hospital and boy babies cost more than girl babies; that's why my mother had to pay more for my brother."

The preschool child's curiosity is expressed not only in questions, but also in looking and exploring. Activity and experimentation are the young child's primary modes of learning, and this is as true in the sexual area as in any other. This is the time of playing doctor and nurse, or "You show me what you've got and I'll show you what I've got." To the children these games are just ways of having fun, but many parents feel uncomfortable and embarrassed, and find it difficult to deal with their child's explorations.

Sexual experimentation among children is a normal part of social sexual development. The more important consideration is not the behavior, but rather adult response to the behavior. Adults have difficulty ac-

cepting children's sexual behavior because they tend to see it in terms of adult sexuality. Sociologists Simon and Gagnon believe that guilt is a major outcome of adult response to childhood sexual behavior:

> "Despite our present capacity as a society to generate high levels of public discourse about sexual matters, it is probably not unreasonable to assert that learning about sex in our society is learning about guilt; conversely, learning how to manage sexuality constitutes learning how to manage guilt. An important source of guilt is the imputation by adults of sexual capacities or qualities in children that children may not have, but that result in—however imperfectly—children learning to act as if they had such capacities or qualities."[2]

The informed, understanding parent has an opportunity to help children develop positive attitudes toward sexuality and toward themselves as sexual beings.

Sex Education and Physician's Role

The debate over sex education in the schools continues, but little attention is given to the sex education needs of preschool children. These needs can be identified easily by examining the interrelated developmental sequences of childhood. Sexual development does not occur in isolation and need not be separated from other developmental tasks of the child. Conversely, anyone interested in the total development of the child should be concerned with cognitive and social learning affecting sexual development.

Young children's developmental needs related to sexuality include self-acceptance and development of a positive self-concept. During adolescence and adulthood, there is a close tie between feelings of sexual adequacy and feelings of self-esteem. Attitudes toward self begin at a young age and result from reinforcement and nonreinforcement by parents and other adults. Also, infants and young children need to experience satisfying behaviors such as nestling, touching, and stroking that will be incorporated into adult sexual behavior. Children need a vocabulary for "sex language" that enables them to talk about their body parts and functions. An understanding of biological male/female differences and reinforcement of individual adequacy is another important need for the preschool child.

The preschooler needs information about pregnancy and birth that is appropriate for his or her level of cognitive development. One study has demonstrated that children's concepts concerning the origin of babies follow a developmental sequence and are related to levels of cognitive development:

> "At Level 1, children are preformist and, in essence, do not see the need for a 'cause' of babies. In Level 2, the causes are assimilated from notions of people as manufacturers. Children at Level 3 isolate two or three main factors: social; sexual; and biological; but do not coordinate them in a true system. With advent of concrete operations, children at Level 4 do coordinate the variables in a system of physical causes but fail to come to grips with genetic transmission. Level 5 children are quite familiar with genetic transmission but conceptualize it as additive rather than interactive. . . . Finally, at Level 6, children provide a reasonably sophisticated scientific theory of how people get babies."[3]

Preschoolers would normally fall into level 1 or 2. The implications of this research are that when we provide information about reproduction, we first need to find out the child's level of conceptualization. The level of understanding reported by the preschooler is not necessarily low because he has been given the wrong information; rather, his explanation reflects how he interprets the information. Therefore, the child should be given information that is only one level above his current level

of conceptualization. There is no need to go to higher levels until the child first moves on to the next level. For example, a child at level 1 assumes that babies have always existed. The next level of understanding would be that babies come from mothers, and it would be inappropriate to start talking about the sperm and the egg at this point.

Learning related to childhood sexual development occurs primarily within the social unit of the family. Physicians can play an important role in helping parents to understand and accept childhood sexuality as a part of normal development. During well-child care, physicians can provide guidance concerning anticipated sexual development along with other developmental expectations. In addition, physicians can assist parents in feeling comfortable with their own sexuality so that they can communicate positive attitudes to their children.

The number of children attending child care centers and early childhood learning centers has been increasing. Thus, the unit for socialization and learning is extending to secondary groups. This trend provides an opportunity for physicians interested in child development to work with teachers and child care workers concerning an understanding of childhood sexual development. It may also be possible to reach groups of parents through child care centers.

The data base concerning childhood sexual development is sufficient to provide guidance for parents and other adults who care for children. Child health care personnel and educators need to become more familiar with this information. The objective is not to consider sexual development as a separate entity, but rather to relate it to the other areas of child development that already concern health care providers and educators.

The period of childhood is crucial not because of what happens of a sexual nature, but because of the nonsexual developments that will provide the meanings and values that will condition subsequent sexuality and sexual behavior.[2]

References

1. Broderick CB: Sexual behavior among preadolescents. J Social Issues 22:6-21, 1966.
2. Simon W, Gagnon JH: On Psychosexual development, in: Grummon DL, Barclay AM, Eds: Sexuality: a search for perspective. New York, Von Nostrand Reinhold Co, 1971.
3. Berstein AC, Cowan PA: Children's concepts of how people get babies. Child Dev 46:77-91, 1975.

Guy S. Parcel, PhD, Assistant Professor of Pediatrics and Preventive Medicine and Community Health, School Health Programs, The University of Texas Medical Branch, Galveston, TX 77550.

Fetal monitoring

Angel Werch, MD; Clark M. Hinkley, MD; Raymond B. Wait, MD

During the past decade considerable interest has developed in evaluating and monitoring the fetus *in utero*. This interest has produced a large volume of information on the environment, homeostasis, and maturation of the unborn. Also, some of the intrauterine fetal dangers have been clarified.

From a mechanical and nutritional viewpoint, the fetus of the normal pregnancy is well protected *in utero;* nevertheless, the fetus does face significant stress during labor when powerful uterine contractions diminish or temporarily eliminate the flow of oxygenated blood into the intervillous space. It is at this time that a fetus with poor intrauterine environment (high-risk pregnancy) will demonstrate this deficit either by changes in fetal heart rate or by the passage of meconium. In some severely compromised pregnancies (for example, those complicated by diabetes, hypertension, or severe toxemia), the oxygen available to the fetus is so deficient that death *in utero* may occur before labor. Monitoring of the fetus during both the antepartum and intrapartum periods has become an important part of daily obstetrics.

For many years, intermittent recording of the fetal heart rate with the obstetrical stethoscope and the detection of meconium in the amniotic fluid were the only indices for diagnosing intrapartum fetal distress. With improvement in electronic recording techniques, it is now possible to obtain a continuous record of fetal heart rate simultaneously with uterine activity. Various patterns of deceleration (bradycardia) have been correlated with uterine contractions to determine the nature of any change in the fetal heart rate. At the same time, techniques for measuring the pH of a fetal scalp blood sampling (Saling technique) have considerably improved our ability to diagnose fetal distress *in utero*.

Techniques

Biochemical Monitoring

Biochemical monitoring using the Saling technique is done by serially evaluating fetal blood pH, carbon dioxide pressure, and oxygen pressure. It is of value only when the patient is in labor, and it requires a certain degree of cervical dilation and ruptured amniotic membranes. A conical endoscope is introduced through the cervix and applied firmly against the presenting part of the fetus, the head or buttocks. The skin is cleansed with a cotton swab and sprayed with ethylchloride to produce hyperemia. A small incision is made with a 2-mm blade. A drop of blood immediately appears at the site and is collected into a capillary glass tube that has been previously heparinized. The sample is taken to the laboratory where appropriate determinations are done. If the blood sample is sealed immediately it can be stored at room temperature for approximately 30 minutes without any significant change in pH. Serial collection of fetal blood samples during labor has shown that a fetal pH is stable in the absence of any complication until shortly before delivery when it tends to fall.[1]

Values obtained in this manner have shown that a pH ranging between 7.20 and 7.30 is acceptable as normal.[2-4] When babies are born in poor condition, fetal scalp blood taken within 30 minutes of

---

This comprehensive review article was prepared for *Texas Medicine* through the cooperation of Fred M. Taylor, MD, director, Office of Continuing Education, Baylor College of Medicine, Houston.

birth usually has a low pH. The closer to delivery one collects the sample, the better the correlation with the Apgar score.

Wood and associates presented significant data correlating fetal blood pH and final outcome. In their work, fetal blood pH measurement was more accurate in determining fetal prognosis than were clinical criteria of fetal distress. Only one in five patients with clinical fetal distress had a low fetal pH, and those patients with a normal fetal pH were successfully managed conservatively. In their series of 400 cases, there were four fetal pH values of less than 7.10 within hours of death *in utero*.[5]

Although his technique of fetal blood sampling is widely known, Saling emphasized the possibility of error.[6] According to his report, erroneous determinations are associated with poor calibration of equipment, caput succedaneum, prolonged exposure of blood sample to air, or extended storage causing auto-oxidation.

Kubli[7] reported a case of severe fetal hemorrhage from the site of the incision in a neonate with hemolytic disease and a coagulation disorder. Other rarely encountered complications have been cellulitis and scalp abscess at the site of incision.

Fetal blood sampling has found widespread acceptance in many countries, especially in New Zealand and Australia and throughout Europe. It is employed routinely in many clinics in West Germany for intensive fetal surveillance. In this country, scalp blood sampling is coming into broader usage to corroborate the finding of fetal distress when first diagnosed with electronic monitoring.

Electronic Monitoring

For many decades the attending physician could only rely on the obstetrical stethoscope to count the fetal heart rate periodically through the mother's abdominal wall. In most instances, that rate is checked for 1 minute every 15 minutes, leaving the fetus unmonitored for 56 minutes out of every hour. Furthermore, as stated by Hon, the stethoscope can detect only the extreme instances of fetal distress, pronounced bradycardia, or significant tachycardia.

In the past, it was thought that the fetal heart rate slowed down normally during uterine contractions. The development of electronic continuous monitoring has shown that this is not so. This kind of monitoring allows for a continuous study of the infant during the uterine contraction (maximal fetal stress) and during uterine relaxation (minimal stress), a time when early signs of fetal distress may become apparent.

The basic equipment needed for monitoring includes a silver-silver spiral electrode and an open-end plastic catheter. This catheter is passed into the uterine cavity, between the cervix and the presenting part. The electrode is attached to the fetal scalp and provides continuous information on the heart rate and fetal ECG complex. In cases of breech presentation, the electrode is attached to the fetal buttocks. Both the electrode and catheter are affixed to a plate strapped to the mother's leg and to a strain gauge, respectively. All the information is then displayed on a bedside monitoring unit. Naturally, some cervical dilatation is needed in order to introduce the catheter, and the amniotic sac should be ruptured in order to attach the electrode to the presenting part. By observing the relationship between the uterine contraction and fetal heart rate, Hon established three different patterns: early, late, and variable deceleration (bradycardia).

The only pattern associated with significant fetal hypoxia is late deceleration. Characteristic of this pattern is that the fetal heart rate becomes bradycardiac, usually at the peak of the uterine contractions, reaches its greatest amplitude 10 to 40 seconds after this peak, and returns to within normal range gradually and after the corresponding uterine contraction has ceased. This type of fetal heart rate pattern is considered a manifestation of fetal hypoxia.

Caldeyro-Barcia and associates,[8] in 1967, reported that reduction in feto-maternal exchange is the primary phenomennon that causes type II dips (late deceleration) along with fetal hypoxia and acidosis. The fact that these dips may be modified by atropine implies that stimulation of the vagal system is involved. Caldeyro-Barcia and coworkers suggest that when the fetal blood oxygen pressure reaches a level of 10 to 20 mm Hg, vagus stimulation occurs and the fetal heart rate pattern of late deceleration is manifested. Furthermore, low oxygen concentration has a direct depressant effect on the myocardium and may diminish beat-to-beat variation.

Early decelerations (Caldeyro-Barcia, type I) occur simultaneously with contractions reaching their greatest amplitude with the peak of the contraction and returning rapidly to the baseline heart rate. Usually the heart rate does not fall below 100 beats per minute and the duration is less than 90 seconds. Neither maternal hypoxia nor fetal biochemical change seems to have any effect on their occurrence. Atropine effectively blocks the bradycardia. Early deceleration is seen in cases of head compression and represents a vagal response to pressure.

Variable decelerations are not necessarily synchronous with the contractions, nor are they consistently related to them. They may be deep (below 80 beats per minute) or mild (above 100 beats per minute) and may last from a few seconds to 60 to 90 seconds. This pattern of variable deceleration, commonly seen in the labor room, is associated with umbilical cord compression and generally disappears after changing the position of the patient. It should be stressed that severe or recurrent variable decelerations may produce hypoxic fetal myocardial depression and late deceleration may follow. Studies by Kubli and others[3] indicate a strong correlation between the ominous fetal heart rate patterns and fetal acid-base status. In the presence of a normal heart rate and good variability there is a virtual absence of acid-base disturbance. There is clearly a place for studying the continuous heart rate as a screening process for fetal asphyxia and then using the fetal pH for confirming or rejecting the diagnosis.

Another area of considerable interest is the use of equipment that does not require cervical dilatation or ruptured membranes to collect data (noninvasive technique). To record the fetal heart rate, several methods have been tried extensively. A fetal ECG is difficult to obtain by applying electrodes to the mother's abdomen, the main problem being that the fetal signal is of very low voltage and there is considerable interference with the maternal signal. Another modality is the use of an abdominal microphone that selectively picks up heart sounds of high frequency. The signal obtained is printed out as a rate. Disadvantages associated with the use of a microphone are the need for constant adjustment of the receiver and distortion of the signal caused by the patient moving in bed.

In this country, the most commonly used monitoring device is ultrasound. The beam

produced by the transmitter detects fetal heart pulsations and returns in the form of a signal. The signal is then fed into a rate-meter and a recording of heart rate can be obtained or the signal can be made audible. This system is also subject to disturbance by the patient's movement or by excessive fetal activity.

For information on uterine activity, a pressure transducer strapped to the abdominal wall will detect relative changes in the tension of the wall at the time of uterine contractions. Although this method does not record intrauterine pressure, an indication of the onset and end of the contraction is provided, which is all that is required to assess the significance of fetal heart rate changes.

Beat-to-Beat Variability

Minor irregularities in beat-to-beat rate reflect the constant interaction of both parasympathetic and sympathetic systems. The interaction causes minor irregularities in the normal human fetal heart rate. Investigators have shown that a fixed heart rate is present with significant problems of the nervous system, for example, patients in coma.[9] Poor beat-to-beat fluctuations and a smooth fetal heart rate have been observed in cases of fetal immaturity, administrat on of depressing drugs to the mother, and fetal asphyxia.

It is important, when evaluating fetal distress, to consider not only the periodic changes occurring to the fetal heart rate concomitant with the contraction, but also the amount of fetal heart rate variability.

Oxytocin Challenge Test

It is well established that uterine contractions cause intermittent decrease in intervillous space blood flow and therefore diminish oxygen transferred from the mother to the fetus.[10] Utilizing this principle, the oxytocin challenge test, also known as oxytocin stress test or posse test, had been devised for the antepartum diagnosis of fetal distress. The equipment needed is the same as for noninvasive external monitoring. Most of the available equipment on the market has a noninvasive monitoring capability where only abdominal sensors are applied to the mother. The fetal heart rate and uterine activity are simultaneously recorded and observed for 10 to 15 minutes. If the spontaneous contractions do not elicit late decelerations, oxytocin infusion is started at 0.5 milliunit (mU) per minute and doubled every 20 minutes if needed to induce uterine contractions at the rate of three per 10-minute interval. The infusion is maintained for 30 minutes, and if no late decelerations are noted it is concluded that there is a reasonable placental reserve and that the fetus can tolerate labor or induction. This is called a negative test. Freeman[11] stated that the negative test done on a weekly basis is reassuring and dependable, even in the face of other signs of uteroplacental insufficiency, in order to avoid unnecessary premature delivery. A positive test, on the other hand, indicates a loss of uteroplacental respiratory reserve and calls for immediate action.

There has been no evidence that the oxytocin challenge test contributes to premature labor or other fetal or maternal morbidity.

Complications Associated with Internal Electronic Monitoring

The most common and major fetal complication is the development of a scalp ab-

scess. In a study by Plavidal and Werch[12] the incidence was 1:230 monitored labors or 0.43%. All infants responded well to drainage, local care, and systemic antibiotics. Two cases of osteomyelitis of the skull of the newborn have been reported; the electrode site was thought to be responsible.

Other less common complications include perforation of the uterine cavity with the plastic catheter (asymptomatic) or infection with herpesvirus hominis type II at the monitor probe site. In one case, drainage of cerebrospinal fluid occurred through the wound produced by the electrode. Regarding maternal morbidity, our studies and those of others have shown that endometritis was rare and that postpartum febrile morbidity could not be attributed directly to the technique used for intrapartum monitoring.

References

1. Beard RW, Simons EG: Diagnosis of foetal asphyxia in labour. Br J Anaesth 43:874-885, 1971.

2. Bretscher J, Saling E: pH values in the human fetus during labor. Am J Obstet Gynecol 97:906-911, 1967.

3. Kubli FW, Hon EH, Khazin AF, et al: Observations on heart rate and pH in the human fetus during labor. Am J Obstet Gynecol 104:1190-1206, 1969.

4. Beard RW, Morris ED: Foetal and maternal acid-base balance during normal labour. J Obstet Gynaecol Br Commonw 72:496-506, 1965.

5. Wood C, Newman W, Lumley J, et al: Classification of fetal heart rate in relation to fetal scalp blood measurements and Apgar score. Am J Obstet Gynecol 105: 942-948, 1969.

6. Saling EZ: Possible errors in fetal blood analysis and their prevention. In Gluck L (Ed): Modern perinatal medicine. Chicago, Year Book Medical Publishers, 1974, p 149.

7. Kubli F, Berg D, Kohnlein G, et al: Microanalysis of foetal blood. A critical study of the method. Ger Med Mon 12:315-327, 1967.

8. Caldeyro-Barcia R, Casacuberta C, Bustos R, et al: Correlation of intrapartum changes in fetal rate with fetal blood oxygen and acid-base state. In Adamsons K (Ed): Diagnosis and treatment of fetal disorders. New York, Springer-Verlag, 1968, pp 205-225.

9. Vallbona C, Cardus D, Spencer WA, et al: Patterns of sinus arrhythmia in patients with lesions of the central nervous system. Am J Cardiol 16:379-389, 1965.

10. Ramsey EM: Uteroplacental circulation during labor. Cline Obstet Gynecol 11:78-95, 1968.

11. Freeman RK: The clinical value of antepartum fetal heart rate monitoring. In Gluck L (Ed): Modern perinatal medicine. Chicago, Year Book Publishers, 1974, p 163.

12. Plavidal F, Werch A: Fetal scalp abscess secondary to monitoring. Am J Obstet Gynecol, 125:65-70, 1976.

The authors, Department of Obstetrics and Gynecology, Baylor College of Medicine, Houston, TX 77030.

Neurological manifestations of systemic lupus erythematosus

Richard C. Senelick, MD

Neurological complications are encountered in 25-75% of all cases of systemic lupus erythematosus. Seizures and psychiatric disturbances occur in 30-50% of patients while other neurological problems occur in fewer cases. Laboratory diagnostic studies are discussed and a review of the current treatment of central nervous system lupus erythematosus is presented. The frequent complications of steroid and immunosuppressive therapy are stressed.

Systemic lupus erythematosus (SLE) a disease with widespread systemic manifestations, frequently affects the nervous system wherein involvement may be as protean in its manifestations as central nervous system lues. Kaposi[1] performed the first autopsy study and reported the association of disturbed cerebral function. Osler[2] made a comprehensive study of the systemic nature of the disease and described hemiplegia and delirium. Libman and Sacks[3] in 1924 reported convulsions and paralysis, postulating the occurrence of emboli from endocardial lesions. Jarcho in 1936 described temporary blindness following convulsions in SLE[4] and in 1941 Klemper and associates reported visual disturbance with or without retinal lesions in SLE.[5] Subsequently, Cluxton and Krause in 1943[6] described toxic delirium manifested by confusion, disorientation, restlessness, and irritability. A number of excellent reviews have appeared.[7-19]

The incidence of neurologic involvement in SLE varies from series to series. In a series of 138 cases of SLE reviewed by Harvey and Tumulty in 1954,[14] 37% of patients had neurologic manifestations. Bailey and Clark[7] reported 28% of their 130 cases had neurologic symptoms. Glaser[12] reported a 30% incidence, O'Connor and Musher 32%,[17] and Johnson and Richardson[15] reported that 75% of their patients had significant neurologic involvement. Estes and Christian, in a prospective analysis of SLE, reported a 59% incidence of neurologic manifestations.[20]

SLE may attack any part of the nervous system and involvement may be intracranial, involving the cortex and brain stem, or extracranial, involving the spinal cord, nerve roots, and peripheral nerves. Reported manifestations include seizures, hemiparesis, subarachnoid hemorrhage, psychosis, delirium, cranial nerve palsies, myelitis, peripheral neuropathy, movement disorders, increased intracranial pressure, aphasia, hallucinations, vertigo, and myasthenia gravis. Each of these will be considered separately.

Clinical Manifestations

Seizures

The general incidence of seizures is approximately 30% although Johnson and Richardson[15] reported a 54% incidence in their series. Seizures may occur as an initial or terminal event. Most seizures develop shortly before death, and status epilepticus in patients with SLE has been reported frequently. The development of seizures does not in itself carry a poor prognosis in SLE, and in the prospective study by Estes[20] a history of seizures did not significantly affect survival.

The occurrence of seizures many years before systemic symptoms develop raises the question as to the real relationship between seizures and SLE. The seizure may be coincidental in the same patient, it may be a part of the primary disease process; or the lupus syndrome may be secondary to the administration of anticonvulsants. There have been numerous reports of lupus

syndromes following the use of diphenylhydantoin, primidone, and trimethadione. Likewise, steroid therapy can lower the seizure threshold in a predisposed patient and increase cerebral excitability. However, a definite correlation has never been shown between the incidence of seizures and high-dose steroid therapy. Similarly the use of anticonvulsants to treat seizures in SLE has not been shown to influence the course of the disease adversely.

Hemiparesis

Hemiparesis occurs in approximately 5% of patients with SLE. Although hemiparesis may be a terminal event, it occurs frequently in intermediate stages of the disease. Recurrent hemiparesis, either ipsilateral or contralateral, has been reported with complete resolution of the deficits. Such cases are thought to be secondary to reversible cerebral arteritis resulting in focal cerebritis. Permanent hemiparesis with associated sensory, visual, and speech difficulties occurs in the distribution of major cerebral vessels. Cerebral angiography may reveal occlusion or narrowing, or both, of the internal carotid, middle cerebral, and other large or medium-size arteries.[22] Large and small hemorrhagic infarctions and intracerebral hemorrhages account for many cases of hemiplegia. Asymptomatic cerebral microinfarcts have been demonstrated throughout the cerebral cortex, white matter, and brain stem.

Spinal Cord Involvement

Paraparesis and transverse myelitis are unusual neurologic complications of SLE. Transverse myelitis usually has a poor prognosis for recovery although Granger[23] reports an interesting case of transverse myelitis with laboratory evidence of SLE in which full recovery followed the use of chloroquine.

The pathologic changes in transverse myelitis are variable. In Bailey's two cases, extensive degeneration of the dorsal columns and posterior root ganglion without significant vascular changes were found.[24] Johnson and Richardson[15] reported demyelination and disruption of axis cylinders in the posterior, lateral, and ventral horns with preservation of the anterior and posterior roots in one case. In the same case, some thickening of the adventitia of the small arteries and veins, without vessel occlusion, was noted in the area of degeneration. The lesions are reminiscent of subacute combined degeneration.

Brain Stem and Cranial Nerve Involvement

Brain stem involvement is less frequent than cortical involvement, but more frequent than spinal cord or peripheral nerve involvement.[25] Extraocular muscle and pupillary abnormalities occur most frequently. Blindness and homonymous hemianopsia, presumably caused by cerebral lesions, have been reported. Involvement of the trigeminal, abducens, facial, acoustic, glossopharyngeal, and vagus nerves at various levels, most often in the brain stem, have been described. Ashworth and Tait[26] report trigeminal neuropathy in five patients with SLE. Cranial nerve palsies are usually accompanied by other signs of brain stem dysfunction such as internuclear ophthalmoplegia, pyramidal tract signs, nystagmus, and cerebellar signs. Neuropathological studies have uniformly shown microinfarcts and other vascular lesions within the brain stem.

Chorea

The choreiform movements in SLE do not differ from those in idiopathic or Sydenham's chorea.[27] Lesions in such cases are not uniformly found in the basal ganglia, although several case reports have correlated chorea with vascular occlusion and infarction in the lenticular nuclei. The central nervous system changes are similar to

those described in Sydenham's chorea with an extensive and diffuse arteritis.

Peripheral Neuropathy

Peripheral neuropathy may present as either mononeuropathy multiplex or symmetrical polyneuropathy.[24,28-30] Polyneuropathy in SLE presents usually as a symmetrical distal motor and sensory loss, although others have reported a predominant motor loss with a picture resembling the Guillain-Barré syndrome. The mononeuropathies include brachial plexus palsy, ulnar nerve palsy, bilateral wrist drop, bilateral sciatic paralysis, and peroneal nerve palsies. Postmortem studies show areas of demyelination in peripheral nerves, posterior columns, and in anterior and posterior roots. Fibrinoid degeneration has also been reported in the leptomeningeal vessels along with perivascular infiltrates and loss axis cylinders. Myasthenia gravis may occur with SLE.[31]

Increased Intracranial Pressure

Increased intracranial pressure without focal neurologic signs has been the subject of several recent reports.[32-34] The use of the term "pseudotumor cerebri" seems to be a misnomer when one can identify SLE as the underlying etiology. Increased intracranial pressure may be the presenting symptom in SLE. The four patients reported by Silberberg and Laties responded well to steroid therapy with resolution of their papilledema. Results of neuropathologic studies are not available, although abnormalities seen on electroencephalograms separate this group of patients from those with pseudotumor cerebri. Numerous ophthalmological manifestations, which should not be confused with papilledema, have been reported. These consist primarily of "cytoid bodies" (cotton-wool spots; actually microinfarcts in the retinal nerve fiber layer with axonal swelling), superficial flame-shaped hemorrhages, hypertensive retinopathy usually secondary to renal disease, and sheathing of retinal vessels. Optic atrophy, retinal detachment, and central vein occlusion have also been reported. Visual hallucinations similar to those seen in migraine are probably due to occipital lobe involvement.[35]

Disturbances of Mental Function

Disturbances in mental function are about as frequent as seizures or perhaps even more so.[36,37] In a series of 150 patients reported by Estes, 42% had disorders of mental function. Acute delirium with disorientation, disturbances of attention, delusions, hallucinations, and often excessive motor activity and paranoia are common. O'Connor found evidence of psychosis in 21 of 40 unselected patients with SLE. Sergent and coworkers[51] recently reported 28 patients with 52 episodes of neuropsychiatric disease in SLE. Fourteen patients had 15 episodes of psychosis. This was most frequently manifested by psychotic depressive reaction with suicidal thoughts. Several mechanisms have been postulated to include a prepsychotic personality, toxic effects of SLE, cerebral lesions, and side effect of steroid therapy. Pathologic studies have not helped in the clinical correlation of psychosis and SLE. Steroids are usually administered in doses of greater than 100 mg per day and are known to cause psychosis at this level. However, patients with SLE receiving steroid therapy have a higher incidence of psychosis than other steroid-treated patients. Sergent and coworkers recommended the use of psychotropic drugs when indicated and a gradual reduction in the dose of prednisone.

Laboratory Data

Cerebrospinal Fluid: Examination of spinal fluid usually produces results within normal limits although the findings are unpredictable. The protein level may be elevated

and there may be albuminocytologic dissociation as in Guillain-Barré syndrome. In aseptic meningitis, pleocytosis is frequently noted.[38] A decrease in the fourth component of complement and IgG has been noted.[39-41] A single recording of either of these may not be diagnostic but it serves as a baseline for followup. Petz and associates believe that cerebrospinal fluid C4 is a reliable indicator of the activity of central nervous system lupus and helps to differentiate other central nervous system disorders.[41]

Electroencephalogram

The electroencephalogram is generally of little diagnostic or localizing value. The most frequent finding has been bilateral slowing or diffusely disorganized activity. Epileptiform activity may be seen in patients with seizures.

Brain Scan

Serial brain scans have been reported to be helpful in following the course of central nervous system lupus.[42] During times of focal neurologic deficit it is not unusual for the brain scan to be abnormal and for the abnormalities to shift from side to side. The abnormalities are thought to represent focal areas of cerebritis or vasculitis, or both. Caution has been recommended in interpretation of these data in light of recent reports of intracerebral lymphomas in patients receiving immunosuppressive therapy for SLE.[43-45]

Angiography

With episodes of hemiplegia and major neurologic deficits, stenosis or total occlusion of major intracerebral arteries may be demonstrated.[22] Asymptomatic patients may reveal irregular narrowing alternating with dilatation, giving a beaded effect to the small intracerebral vessels.[46] These findings are nonspecific and are seen in all forms of cerebral arteritis. Angiography may be helpful in differentiating mass lesions from areas of cerebritis.

Neuropathology

There is no single typical pathognomonic lesion in the brain comparable to the "wire-loop" lesion of the kidney. Though it is agreed that the abnormality is mainly vascular in origin, the exact nature of the lesion is still far from clear. In most cases the small arteries and arterioles are involved more than the large and medium-size arteries.[15,47] Lesions usually include endothelial or subendothelial proliferation, hyalinization or fibrinoid degeneration, and thickening of the vessel wall with secondary thrombosis and partial or complete occlusion of the vessel. Perivascular inflammatory exudates are reported with less frequency. Surrounding parenchymal lesions vary from encephalomalacia, hemorrhagic infarction, and cystic degeneration to gliosis, depending on the size of the vessel involved. Johnson and Richardson[15] demonstrated microinfarcts in small hemorrhages in 20 of their 24 autopsy cases of central nervous system lupus. The small vessel changes in SLE are somewhat akin to the changes found in hypertensive encephalopathy, thrombotic thrombocytopenic purpura, acute rheumatic fever, and serum sickness. Changes within the vessel walls are not accompanied by inflammatory cells within the vessel walls and therefore cannot be classified as vasculitis in the usual sense. Both spinal cord and peripheral nerve manifestations of SLE are difficult to explain on the basis of vascular changes. It is possible that immunological disease and indeed immune complexes have been demonstrated in the choroid plexus of the brain.[48]

Treatment

The use of systemic steroids and immunosuppressive agents for neurologic manifes-

tations of SLE is an area of great controversy.[18,49-54] Although other manifestations of the disease may clearly respond to systemic steroids, the evidence for similar treatment of the neurologic manifestations is not so clear. Recent data do not confirm an impression of the efficacy of corticosteroid therapy for central nervous system disease in SLE. Both retrospective and prospective studies have demonstrated that isolated seizures and psychosis do not affect five-year survival rates.[45,54] Patients with organic brain syndromes and focal neurologic disease have a five-year survival of approximately 40-50%. Many patients are no longer dying of SLE but of the side effects of prolonged high doses of steroids or immunosuppressive drugs. Overwhelming sepsis, osteonecrosis of the femoral heads, diabetes mellitus, myopathy, hypertension, fungal infections, herpes zoster, and Cushing's syndrome are not unusual complications of long-term steroid therapy. A review of current data reveals an increase in side effects when dosages of greater than 100 mg per day are given. The use of immunosuppressive agents (cyclophosphamide and azathioprine) is associated with both minor and life-threatening complications.[43-45,55-57] Hair loss and hemorrhagic cystitis are common with cyclophosphamide. Both cyclophosphamide and azathioprine are associated with an increased incidence of infection and neoplasia. Tuberculosis and fungal infections may disseminate and more exotic infections such as cytomegalovirus and *Pneumocystis carinii* are more common in treated patients. An increased incidence of reticulum cell sarcoma, particularly within the central nervous system, has been reported with both drugs.

Adequate treatment does not exist for central nervous system lupus, and indeed the care of patients with this disease is increasingly becoming the management of complications of steroid and immunosuppressive therapy.

References

1. Kaposi M: Neue Beitrage zur Kenntnis des Lupus erythematosus. Arch Dermat U Syph 4:36-78, 1872.

2. Osler W: On the visceral complication of erythema exudativum multiforme. Am J Med Sci 110:629-646, 1895.

3. Libman E, Sacks B: A hitherto undescribed form of valvular and mural endocarditis. Arch Intern Med 33:701-737, 1924.

4. Jarcho S: Lupus erythematosus associated with visceral vascular lesions; series of autopsied cases. Bull John Hopkins Hosp 59:262-273, 1936.

5. Klemperer P, Pollack AD, Baehr G: Pathology of disseminated lupus erythematosus. Arch Pathol 32:569-631, 1941.

6. Cluxton HE Jr, Krause LA: Acute lupus erythematosus disseminatus. Ann Intern Med 19:543-872, 1943.

7. Clark EC, Bailey AA: Neurological and psychiatric signs associated with systemic lupus erythematosus. JAMA 160:455-457, 1956.

8. Bennett R, Hughes GR, Bywaters EG, et al: Neuropsychiatric problems in systemic lupus erythematosus. Br Med J 4:342-345, 1972.

9. Clark EC, Yoss RE: Nervous system findings associated with systemic lupus erythematosus. Minn Med 39:517-520, 1956.

10. Daly D: Central nervous system in acute disseminated lupus erythematosus. J Nerv Ment Dis 102:461-465, 1945.

11. Decker JL, Steinberg AD, Gershwin ME, et al: Systemic lupus erythematosus. Contrasts and comparisons. Ann Intern Med 82 (3):391-404, 1975.

12. Glaser GH: Lesions of central nervous system in disseminated lupus erythematosus. AMA Arch Neurol Psychiat 67:745-753, 1952.

13. Glaser GH: Neurologic manifestations in collagen diseases; problems of prognosis and treatment. Neurology 5:751-766, 1955.

14. Harvey AM, Shulman LE, Tumulty PA, et al: Systemic lupus erythematosus: review of literature and clinical analysis of 138 cases. Medicine 33:291-437, 1954.

15. Johnson RT, Richardson EP: The neurological manifestations of systemic lupus erythematosus. Medicine 47:337-369, 1968.

16. Malamud N, Saver G: Neuropathologic findings in disseminated lupus erythematosus. AMA Arch Neurol Psychiat 71:723-731, 1954.

17. O'Connor JF, Musher DM: Central nervous system involvement in systemic lupus erythematosus. A study of 150 cases. Arch Neurol (Chicago) 14:157-164, 1966.

18. Fulton WH, Dyken PR: Neurological syndromes of systemic lupus erythematosus. Neurology (Minneap) 14:317-323, 1964.

19. Siekert RG, Clark EC: Neurologic signs and symptoms as early manifestations of systemic lupus erythematosus. Neurology 5:84-88, 1955.

20. Estes D, Christian CL: The natural history of systemic lupus erythematosus by prospective analysis. Medicine (Baltimore) 50:85-95, 1971.

21. Benton JW, Tynes B, Register HB Jr, et al: Systemic lupus erythematosus occurring during anticonvulsive drug therapy. JAMA 180:115-118, 1962.

22. Trevor RP, Sondheimer FK, Fessel WJ, et al: Angiographic demonstration of major cerebral vessel occlusion in systemic lupus erythematosus. Neuroradiology 4:202-207, 1972.

23. Granger DP: Transverse myelitis with recovery: the only manifestation of systemic lupus erythematosus. Neurology (Minneap) 10:325-329, 1960.

24. Bailey AA, Sayre GP, Clark EC: Neuritis associated with systemic lupus erythematosus; report of 5 cases with necropsy in 2. AMA Arch Neurol Phychiat 75:251-259, 1956.

25. Kulis JC, Trakas DA: Systemic lupus erythematosus with brainstem involvement. Neurology (Minneap) 15:878-879, 1965.

26. Ashworth B, Tait GB: Trigeminal neuropathy in connective tissue disease. Neurology 21:609-614, 1971.

27. Greenhouse AH: On chorea, lupus erythematosus, and cerebral arteritis. Arch Intern Med (Chicago) 117: 389-393, 1966.

28. Gargour G, MacGaffey K, Locke S, et al: Anterior radiculopathy and lupus erythematosus cells: report of a case. Br Med J 5412:799-801, 1964.

29. Lewis DC: Systemic lupus and polyneuropathy. Arch Intern Med (Chicago) 116:518-522, 1965.

30. Scheinberg L: Polyneuritis in systemic lupus erythematosus; review of literature and report of case. N Eng J Med 225:416-421, 1956.

31. Wolf SM, Barrows HS: Myasthenia gravis and systemic lupus erythematosus. Arch Neurol (Chicago) 14:254-258, 1966.

32. Bettman JW, Daroff RB, Sanders MD, et al: Papilledema and asymptomatic intracranial hypertension in systemic lupus erythematosus. A fluorescein angiographic study of resolving papilledema. Arch Ophthal 80:189-193, 1968.

33. Carlow TJ, Glaser JS: Pseudotumor cerebri syndrome in systemic lupus erythematosus. JAMA 228:197-200, 1974.

34. Silberberg DH, Laties AM: Increased intracranial pressure in disseminated lupus erythematosus. Arch Neurol 29:88-90, 1973.

35. Brandt KD, Lessell S, Cohen AS: Cerebral disorders of vision in systemic lupus erythematosus. Ann Intern Med 83(2):163-169, 1975.

36. Hanrahan GE: 3 cases of disseminated lupus erythematosus with psychosis. Canad M A J 71:374-377, 1954.

37. O'Connor JF: Psychoses associated with systemic lupus erythematosus. Ann Intern Med 51:526-536, 1959.

38. Canoso JJ, Cohen AS: Aseptic meningitis in systemic lupus erythematosus. Report of three cases. Arthritis Rheum 18(4):369-374, 1975.

39. Hadler NM, Gerwin RD, Frank MM, et al: The fourth component of complement in the cerebrospinal fluid in systemic lupus erythematosus. Arthritis Rheum 16:507-521, 1973.

40. Levin SA, Fudenberg HH, Petz LD, et al: IgG levels in cerebrospinal fluid of patients with central nervous system manifestations of systemic lupus erythematosus. Clin Immunol Immunopathol 1:1-5, 1972.

41. Petz LD, Sharp GC, Cooper NR, et al: Serum and cerebral spinal fluid complement and serum autoantibodies in systemic lupus erythematosus. Medicine (Baltimore) 50:259-275, 1971.

42. Bennahum DA, Messner RP, Shoop JD: Brain scan findings in central nervous system involvement by lupus erythematosus. Ann Intern Med 81(6):763-765, 1974.

43. Lipsmeyer EA: Development of malignant cerebral lymphoma in a patient with systemic lupus erythematosus treated with immunosuppression. Arthritis Rheum 15:183-186, 1972.

44. Uhl GS, Williams JE, Arnett FC: Intracerebral lymphoma in a patient with central nervous system lupus on cyclophosphamide. J Rheum 1:282-286, 1974.

45. Tannenbaum H, Schur PH: Development of reticulum cell sarcoma during cyclophosphamide therapy. Arthritis Rheum 17:15-18, 1974.

46. Ferris EJ, Levine HL: Cerebral arteritis: classification. Radiology 109:327-341, 1973.

47. Mintz G, Fraga A: Arteritis in systemic lupus erythematosus. Arch Intern Med (Chicago) 116:55-66, 1965.

48. Atkins CJ, Kondon JJ Jr, Quismorio FP, et al: The choroid plexus in systemic lupus erythematosus. Ann Intern Med 76:65-72, 1972.

49. Feng PH, Cheah PS, Lee YK: Mortality in systemic lupus erythematosus: a 10-year review. Br Med J 4:772-774, 1973.

50. Sergent JS, Lockshin MD: Editorial: Treatment of central nervous system lupus erythematosus. Ann Intern Med 80:413-414, 1974.

51. Sergent JS, Lockshin MD, Klempner MS, et al: Central nervous system disease in systemic lupus erythematosus. Therapy and prognosis. Am J Med 58(5): 644-654, 1975.

52. Feng PH, Jayaratnam FJ, Tock EP, et al: Cyclophosphamide in treatment of systemic lupus erythematosus: 7 years' experience. Br Med J 2:450-452, 1973.

53. Fries JF, Weyl S, Holman HR: Estimating prognosis in systemic lupus erythematosus. Am J Med 57(4):561-565, 1974.

54. Steinberg AD, Plotz PH, Wolf SM, et al: Cytotoxic drugs in treatment of nonmalignant diseases. Ann Intern Med 76:619-642, 1972.

55. Cammarata RJ, Rodman GP, Jensen WN: Systemic rheumatic disease and malignant lymphoma. Arch Intern Med (Chicago) 111:330-337, 1963.

56. Decker JL: Toxicity of immunosuppressive drugs in man. Arthritis Rheum 16:89-91, 1973.

57. Miller DG: The association of immune disease and malignant lymphoma. Ann Intern Med 66:507-521, 1967.

Richard C. Senelick, MD, Suite 1006, 343 West Houston, San Antonio, TX 78205.

Intermittent neurogenic claudication

Bernard S. Epstein, MD; Joseph A. Epstein, MD; Malcolm D. Jones, MD

The initial report of a neurologic condition which simulates vascular claudication emphasized the importance of stenosis of the lumbar spinal canal.[11,12] Verbiest further divided this into categories termed absolute and relative stenosis, noting that absolute stenosis led to neural disturbances without other compressive agents or deformities, while relative stenosis caused similar complaints in the presence of small compressive agents such as spondylotic ridges. He designated sagittal diameters of the lumbar spinal canal of 10 mm or less as a measure of absolute stenosis, and 10 to 12 mm a measure of relative stenosis. He also commented on the importance of developmental foraminal narrowing and included additional factors such as short pedicles, hypertrophic articular processes, and degenerative discal deformities.[13]

Our report stresses the variability of clinical manifestations and the multiple structural and functional changes associated with intermittent neurogenic claudication which affect the dimensions and configuration of the lumbar canal.

Clinical Aspects

Claudication indicates limping, classically associated with aortofemoral vascular insufficiency. Salient features include crampy, tight, tired sensations affecting exercised muscle groups and, less often, paresthesias and dysesthesias. The limbs become stiff and later immobile. Relief is obtained by standing still. Exercise results in diminished pulsations, while bruits may become more audible. Sitting or lying down is not essential for relief, nor are postural changes effective. Impotence may or may not occur, and loss of sphincter control is uncommon.

Intermittent neurogenic claudication appears with low back and buttock pain either at rest or during exertion, radiates down one or both legs, and has a dysesthetic or paresthetic quality different from the pain of sciatica, with which it often is concomitant. Sensory symptoms precede motor changes. Numbness, coldness, burning, and, less often, crampy sensations appear rapidly and tend to occur while the patient stands with his back hyperextended. The sensations are not affected by straining or coughing. Weakness and even collapse may follow prolonged standing or exercise. Usually activity is discontinued before weakness appears. Lying prone or bending forward reduces the lumbar lordotic curve and relieves discomfort. Restriction of straight leg bending usually is mild. Reflex changes are limited, impotence occasionally is present, and sphincter disturbances are more frequent than with vascular claudication. Normal femoral and pedal pulses are usually present.

A division into postural and ischemic forms has been suggested, with realization that they can coexist.[15]

Complex Neurogenic Claudication Syndromes

With pure lumbar stenosis at one or more levels, intermittent neurogenic claudication is relatively straightforward. However, complicating factors can cloud and obscure the complaints. Lumbar stenosis associated with one or more discal intrusions, changes associated with hypertrophy of the neural arches, and thickening of the articular facets and the yellow ligaments can produce syndromes in which sciatica, back pain, dysesthesias, paresthesias, restricted degree of leg raising,

From the Departments of Radiology of The University of Texas Health Science Center at San Antonio, and the Audie Murphy Veterans Administration Hospital, San Antonio, Tex, and the Long Island Jewish-Hillside Medical Center, New Hyde Park, NY.

1. The patient is a 33-year-old man with a four-year history of low back pain radiating down both legs, usually associated with activity, sometimes spontaneous, which is relieved by rest. He cannot sleep in the prone position. He has no pain or neurologic symptoms when at rest. a. Antero-posterior myelogram (18 cc Pantopaque) reveals a huge defect somewhat more to the right side. b. Lateral myelogram indicates a large lesion blocking the canal. At operation, a huge extruded L-4 disc was removed.

a

c

b

and other neurologic signs overlap. Small discal herniations can produce disproportionate neurologic effects when they intrude into a stenotic canal, particularly when nerve roots are trapped in the lateral recesses of the canal and in the intervertebral foramina.[4] Anterior ridge formations and osteophytic overgrowth appear alone or together with discal herniations, and complicate the effects of dorsal intrusions. Spondylolisthesis, usually at L-4 and with an intact neural arch, together with thickening of the dorsal elements is a fairly frequent cause of localized stenosis.[7] These degenerative changes can become prominent enough to produce stenosis in an otherwise adequate canal. Lumbar nerve root compression, either foraminal or in narrowed lateral recesses, associated with degenerative arthritis of the facets without sagittal stenosis also can cause neurogenic intermittent claudication.[5]

Other lesions causing intermittent neurogenic claudication include large midline discal extrusions.[1] Some question has been raised as to whether lateral lesions can produce a similar picture.[10,15] It seems reasonable to suspect that extensive Paget's disease of the lumbar spine may cause intermittent neurogenic claudication, or that spinal fusion with accelerated spondylotic change and disc degeneration or extrusion can produce a similar picture. We saw a 33-year-old man with a huge extruded L-4 disc (Fig 1) and a 52-year-old man who had a laminectomy and spinal fusion because of classical neurogenic claudication 20 years ago. The latter patient had a recent recurrence attributed to a large herniated L-4 disc which was removed surgically. No information as to the original operative findings is available.

Plain Film Radiograph Examination

Anteroposterior, lateral, and lateral cone-down films of the lumbosacral joint are essential. Additional information is obtained from oblique films and lateral tomograms. Transverse axial tomograms, not yet generally available, can provide help in evaluating the sagittal configuration of the canal and its lateral recesses.[9] Accurate measurement of the sagittal diameter is difficult, but observation of the size and configuration of the intervertebral foramina on true lateral films is useful.[4] Normally these are widely ovoid, and measure about 15 mm at the widest point. With sagittal stenosis, they become flattened, elongated, and present discal indentations into the middle of the anterior margins. Dorsad intrusions appear from spondyloarthritic changes. This results in a figure-8 configuration reminiscent of achondroplastic change. The pedicles are short and heavy, but the interpedicular distances are not grossly altered. The laminae are thickened and convergent, sometimes so much so that they touch (Fig 2, 3). The articular facets similarly become thickened and overgrown. These degenerative and arthritic changes can intrude significantly into the dorsal aspect of the canal, and may render an otherwise normal canal stenotic at one or more levels. Retrolisthesis and spondylolisthesis are important, especially when associated with spondyloarthritic thickening and hypertrophy of the yellow ligaments (Fig 3).[7] Flexion and extension examinations on occasion reveal abnormal mobility which further intrudes into the canal by shingling of the articular facets. With fixed lordosis, such overlapping can be damaging.

Myelographic Examination

Positive contrast (Pantopaque) myelography is essential. Difficulty in performing a spinal tap may indicate an impending problem because of lack of space for introduction of the needle. If the canal can-

not be entered at the L2-3 or L3-4 levels, an L5-S1 tap can be performed. Fluoroscopic control of the needle insertion and instillation of Pantopaque is advisable. Cineradiographic recording supplements the required spot films. For demonstration of multiple intrusions, a full-column technic is required. With stenotic canals, this can be accomplished with as little as 5 cc of Pantopaque. It is necessary to identify developmental or acquired stenosis, degenerative intrusions, and discal changes, and combinations of these, at single or multiple levels (Figs 2, 4). Often, discal bulges, herniations, and various degenerative intrusions develop simultaneously at one or more levels, and at times, the entire lumbar canal is affected.

Evaluation of myelographic changes requires correlation with clinical conditions because striking defects which do not explain a problem have to be disregarded and further explanation sought.

Computerized Tomographic Scans

We have no direct experience with this exciting development. Inevitably it will add a

2. A 46-year-old woman presented with a six-month history of low back pain radiating from buttocks to both legs, burning sensations in both legs, and weakness. Bending forward brought relief. At first the symptoms were intermittent, but became persistent. a. Anteroposterior film reveals narrowing of discal interspaces, heavy pedicles, and convergent laminae. b. Lateral film shows elongated, narrow intervertebral foramina, narrowing of L3-4 and L4-5 interspaces, and

a

b

new dimension to radiologic study of the spine, not only for demonstrating the configuration of the canal but also for investigation of bone, cartilage, and soft-tissue changes.

Comment

Intermittent neurogenic claudication occurs equally in both sexes, usually during or after middle life, but occasionally it affects younger people. Those with large single discal herniations tend to be younger and to have otherwise adequate lumbar canals. Once established, the syndrome tends to become unremitting, especially in the elderly.

Ischemia of the cauda equina during exercise is regarded as a likely cause, a concept supported by Evans' limited study[8] of oxygen consumption during exercise. Compressive changes incident to exercise and weight bearing are regarded as participating in the genesis of intermittent neurogenic claudication by altering the configuration of the canal and the intervertebral foramina.[1,2] Identification of neurogenic claudication has a practical bearing be-

slight retrolisthesis of L-3 and L-4. c. Anteroposterior myelogram (6 cc Pantopaque) reveals flattening of lateral margins of column, veil defects at L-4 and L-3, and a large intrusion on the right side of L-2. d. Lateral myelogram shows stenosis of canal at L-3 and L-4 levels, a large protruded disc at L-2, and wide canal at L-5. At operation, an extruded disc was found at L-2, spurs and degenerated discs at L-3 and L-4, and stenotic canal at L-3 and L-4.

c

d

cause extension of the back or other postural alterations can have adverse effects and should be guarded against during anesthesia.[3]

In evaluating the radiologic changes which might help identify anatomic factors, we reviewed records of 35 unselected patients with predominant intermittent neurogenic claudication or, more often, that syndrome together with radicular and low back pain. Of these, 19 had multiple lesions affecting two or more vertebral segments. In this group there were but five in whom claudication overshadowed radicular and low back pain. Of 11 patients with lesions limited to a single level, there were nine at L-4 and two at L-3. Spondylolisthesis with an intact neural arch, together with spondyloarthritic changes at L4-5, was present in eight of these, and discal intrusions were noted in six. Claudication was prominent in some of these patients, but often it was difficult to decide which was the more pressing complaint. In two patients there was pure stenosis of the lumbar canal at a single level, both at L-4, and in these, claudication was prominent. Two patients had large discal extrusions at

3. A 72-year-old woman presented with a low back pain, buttock and leg pain, and claudication at rest or on walking. She had exaggerated lordosis. a. Anteroposterior film reveals heavy pedicles and convergent laminae. b. Lateral myelogram (3 cc Pantopaque) shows a tapered block at L4-5, heavy overgrowth of the laminae of L-3 and L-4, and anterolisthesis of L-4 and L-5. Localized stenosis results from impingement of hypertrophied L-4 neural arch.

a

b

L-3 and one at L-4; they had radicular as well as claudication pain and neurogenic manifestations. In one patient, claudication appeared with an epidural abscess following discal surgery.

Summary

Intermittent neurogenic claudication occurs frequently in patients with stenotic spinal canals, with degenerative changes and discal disease at multiple levels. Single-level lesions are most prominent at the L4-5 interspace, and spondylolisthesis with an intact neural arch together with discal change are relatively frequent. Excessive lumbar lordosis augments symptoms. Claudication also occurs with large discal extrusions. The underlying anatomic factor apparently is construction of the

4. The patient is a 54-year-old man with extensive lumbar spondylosis and previous lumbar fusion. He has a long history of low back pain radiating to both legs, paresthesias and dysesthesias, and difficulty in walking; he walks with a pronounced forward stoop in an attempt to relieve pain. a. and b. Anteroposterior and lateral myelograms. The 5 cc of Pantopaque practically fills the canal, and multiple defects in a stenotic canal with heavy pedicles and convergent laminae are seen. At operation, large spurs were found at L2-3, and at L4-5 a large spur and an extruded disc, together with huge masses of overgrown bone at facets, and dense scarring of dura.

a

b

spinal canal and the intervertebral foramina at one or more levels, more often the latter.

References

1. Blau JN, Logue V: Intermittent claudication of the cauda equina. An unusual syndrome resulting from central protrusion of a lumbar intervertebral disc. Lancet 1:1081-1086, 1961.

2. Brish A, Lerner MA, Braham J: Intermittent claudication from compression of cauda equina by a narrowed spinal canal. J Neurosurg 21:207-211, 1964.

3. Ehni G: Spondylotic cauda equina radiculopathy. Texas J Med 61: 746-752, 1965.

4. Epstein BS, Epstein JA, Lavine L: The effect of anatomic variations in the lumbar vertebrae and spinal canal on cauda equina and nerve root syndromes. Amer J Roentgen 91:1055-1063, 1964.

5. Epstein JA, Epstein BS, Lavine L: Nerve root compression associated with narrowing of the lumbar spinal canal. J Neurol, Neurosurg, Psychiat 25:165-176, 1962.

6. Epstein JA, Epstein BS, Lavine LS, et al: Lumbar nerve root compression at the intervertebral foramina caused by arthritis of the posterior facets. J Neurosurg 39:362-369, 1973.

7. Epstein JA, Epstein BS, Lavine L, et al: Degenerative lumbar spondylolisthesis with an intact neural arch (pseudospondylolisthesis). J Neurosurg 44(2):139-147, 1976.

8. Evans JG: Neurogenic intermittent claudication. Brit Med J 5415:985-987, 1964.

9. Jacobson RE, Gargano FP, Rosomoff HL: Transverse axial tomography of the spine. Part 2: the stenotic spinal canal. J Neurosurg 42(4):412-419, 1975.

10. Spanos NC, Andrew J: Intermittent claudication and lateral lumbar disc protrusions. J Neurol, Neurosurg, Psychiat 29:273-277, 1966.

11. Verbiest H: Radicular syndrome from developmental narrowing of lumbar vertebral canal. J Bone & Joint Surg 36-B:230-237, 1954.

12. Verbiest H: Further experiences on the pathological influence of developmental narrowness of bony lumbar vertebral canal. J Bone & Joint Surg 37-B:576-583, 1955.

13. Verbiest H: Neurogenic intermittent claudication with absolute and relative stenosis of the lumbar vertebral canal (ASLC and RSLC), in cases with narrow lumbar intervertebral foramina, and in cases with both entities. Clin Neurosurg 20:204-214, 1972.

14. Verbiest CB, Ehni G, Grollmus J: Neurogenic intermittent claudication. Clin Neurosurg 18:62-85, 1971.

15. Wilson CB, Ehni G, Grollmus J: Neurogenic intermittent claudication. Clin Neurosurg 18:62-85, 1971.

Bernard Epstein, MD, and Malcolm D. Jones, MD, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284.
Joseph A. Epstein, MD, 1400 Union Turnpike, New Hyde Park, NY 11040.

Massive bleeding from angiomyolipoma of the kidney

Inayat I. Lalani, MD

A case of massive retroperitoneal hemorrhage from a previously unsuspected angiomyolipoma of the kidney is described. A short review of the literature and comments about the clinical characteristics and management of the disease are presented.

Angiomyolipoma of the kidney is an uncommon benign tumor which is most often silent and frequently is an incidental finding in a patient with tuberous sclerosis. However, it can present a dramatic clinical picture.

Report of a Case

A 56-year-old woman presented with severe pain in the left side of the abdomen and the lower chest area. There was no history of trauma. The pain had started several hours earlier while the patient was at work; it radiated to the back and was steady. There was some nausea but no vomiting, and the patient said she had no chills, fever, diarrhea, urinary frequency, burning, or hematuria. There was no obstipation or history of recent weight loss. Except for a cesarean section 35 years earlier, the patient's medical history was unremarkable. She smoked 20 cigarettes a day and did not drink. Initially, the patient was unable to provide much family history, partly because she was ill and partly because she was of low intelligence.

Physical examination showed a well-developed, well-nourished woman with severe pain in the abdomen and the left flank. Temperature, pulse rate and respirations were normal. The initial blood pressure reading of 130/80 mm Hg fell to 100/70 about an hour later, with corresponding quickening of pulse. There was pallor but no icterus, cyanosis, or dehydration. Pertinent positive physical findings were restricted to the abdomen, which was minimally distended. There was tenderness with rebound in the left flank and left lower quadrant, and some tenderness also was present over the left costovertebral angle. No masses or organomegaly were noted and the bowel sounds were absent. Rectal examination disclosed no abnormalities, and pelvic examination revealed a small, stalked, fibrous tumor coming out of the cervix. Distal pulses were present and strong.

Laboratory data were as follows: hemoglobin 8.7 gm/100 ml; hematocrit, 26%; white blood cell count, 16,300 with polymorphonuclear predominance. Urinalysis showed proteinuria (2+) but was otherwise normal. The rest of the laboratory data were within normal limits. A scout film of the abdomen showed generalized increase in haziness but no fluid levels or free air under the diaphragm. There were no radiopaque calculi and no other clues as to the nature of the intra-abdominal disease.

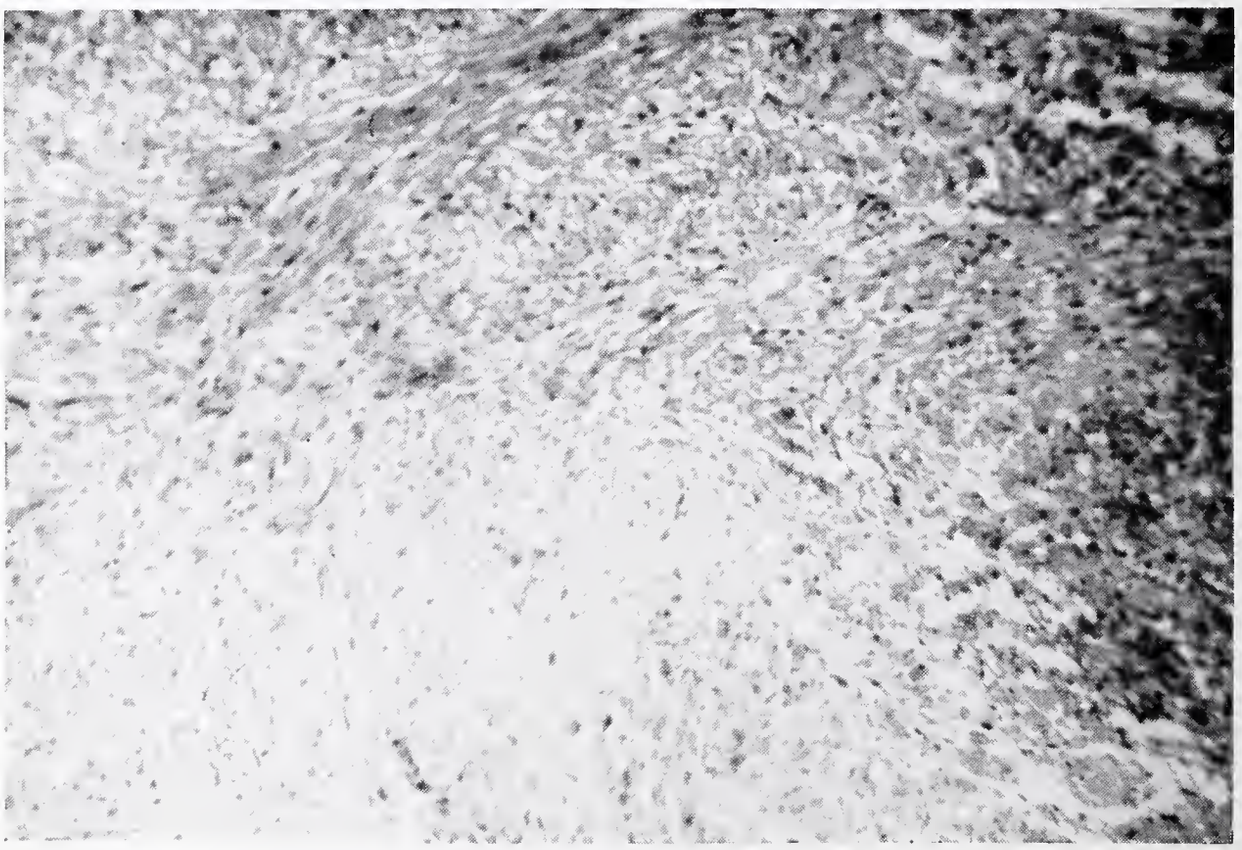
The tentative diagnosis was acute perforation of an intra-abdominal viscus, probably perforated diverticulitis of the sigmoid. The patient was given a transfusion of 1 liter of whole blood, and surgery was performed. It was immediately apparent that the disease was retroperitoneal rather than intra-abdominal: there was a large hematoma in the left paravertebral gutter. After ascertaining that the aorta was not involved, we decided that although the choice of incision—through the left rectus abdominis had been unfortunate, there was no alternative but to proceed. Accordingly, the peritoneum just lateral to the hematoma was incised and a torrential gush of fluid blood, some of it arterial, ensued. This and coexisting blood

clots were removed rapidly, and we saw that the main lesion was a large, yellowish gray, remarkably soft tumor. Since bleeding was continuing unabated, the tumor was removed piecemeal as a matter of expediency. After a mass of approximately 300 gm was thus removed, it became apparent that the tumor arose at the lower pole of the kidney. We decided to remove the kidney in order to secure the source of bleeding. The renal pedicle was isolated, and the renal artery and vein were divided separately and their proximal stumps were secured. The ureter was then divided and its distal stump was secured. The remaining portion of the kidney was then excised. A cursory examination of the removed specimen revealed that it was indeed the origin of the tumor. Because of the soft, extremely friable, and vascular nature of the tumor, we surmised that this was a case of adenocarcinoma of the kidney.

Because of the patient's poor condition (2,500 ml of whole blood had been transfused meanwhile) we decided to terminate the operation and the abdomen was closed.

The postoperative course was remarkably smooth with the patient's condition rapidly improving during succeeding few days. The wound healed by first intention. On the seventh postoperative day, shortly before discharge, an excretory urogram was obtained and showed a normally functioning right kidney, with no indication of

1. Appearance of angiomatous and myomatous components at low power. Hematoxylin and eosin, X 30.



additional tumors. Postoperatively, blood urea nitrogen and serum creatinine values were within normal limits. Two years after the operation, the patient enjoys good health and has returned to her usual work.

Pathological Findings

The kidney removed at operation showed a defect at its lower pole representing the site of the tumor. Tumor tissue attached to this area was similar to that of the main mass. There was no evidence of infiltration of the renal vein, pelvis, or the ureter by the tumor tissue. The rest of the renal tissue was normal in every respect.

The main tumor tissue grossly appeared to be friable, hemorrhagic, and yellowish-gray. Microscopically, it had a highly variegated appearance. The major portion of the tumor consisted of the adult type of fatty tissue, the fat cells having signet ring appearance. A few cells were characterized as lipoblasts but no pleomorphism, atypia, or hyperchromatism were noted. A second component represented well-differentiated vascular tissue with intact walls and even differentiation into arterial and venous structures. The third component consisted of smooth muscle tissue exhibiting the full range of differentiation from highly primitive small round or oval cells with relatively small dark nuclei to unmistakable adult smooth muscle with all manner of inter-

2. Mature fat cells predominate in this section, but a few lipoblasts are also present. Hematoxylin and eosin, X 300.

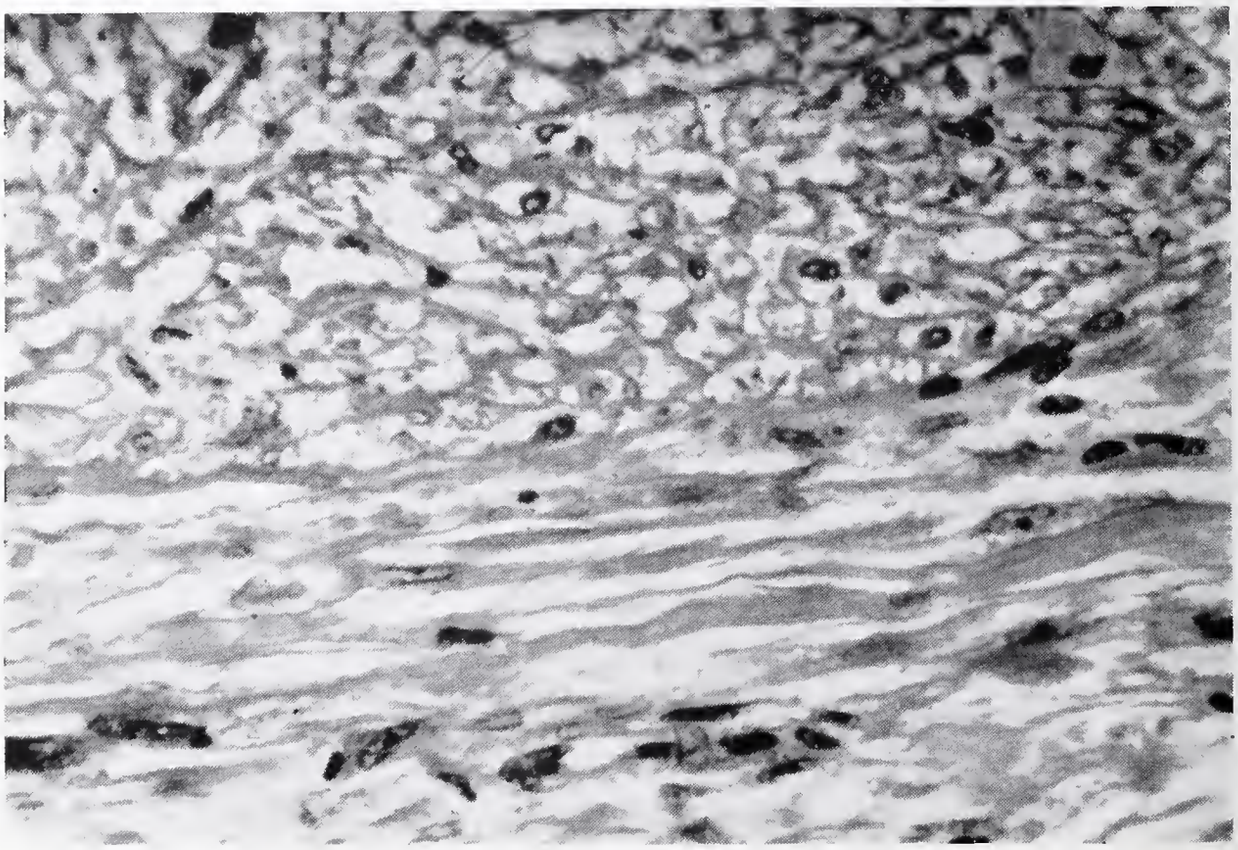
mediate cells forming a leiomyomatous element in this mixed tumor. There were no anaplastic changes and no evidence of vascular or other invasion.

The pathological diagnosis was benign angiomyolipoma of the left kidney.

Discussion

Further information regarding the patient's history was obtained from her younger sister. Although the patient was barely able to read and write, she came from an intelligent family with no history of mental retardation, psychiatric illnesses, or epilepsy among her 11 siblings or other relatives. She was described as being "independent" and at times "stubborn" and "peculiar." She was also described as "slow," and was not able to finish more than a few grades of schooling. While other members of her family were successful in business and professions, she became a manual laborer with a low-paying job. The patient's only child had even lower intelligence, a more subnormal personality, and a lurching gait because of what was described as a congenital hip defect. She had no epilepsy. The propositus had four grandchildren, two of whom were definitely and extremely retarded. There was some question regarding the mental status of the other two. Apparently social welfare agencies believed that the problems of these two children were environmental rather than constitutional. All four children had been taken

3. Myomatous element under high power. Hematoxylin and eosin, X 300.



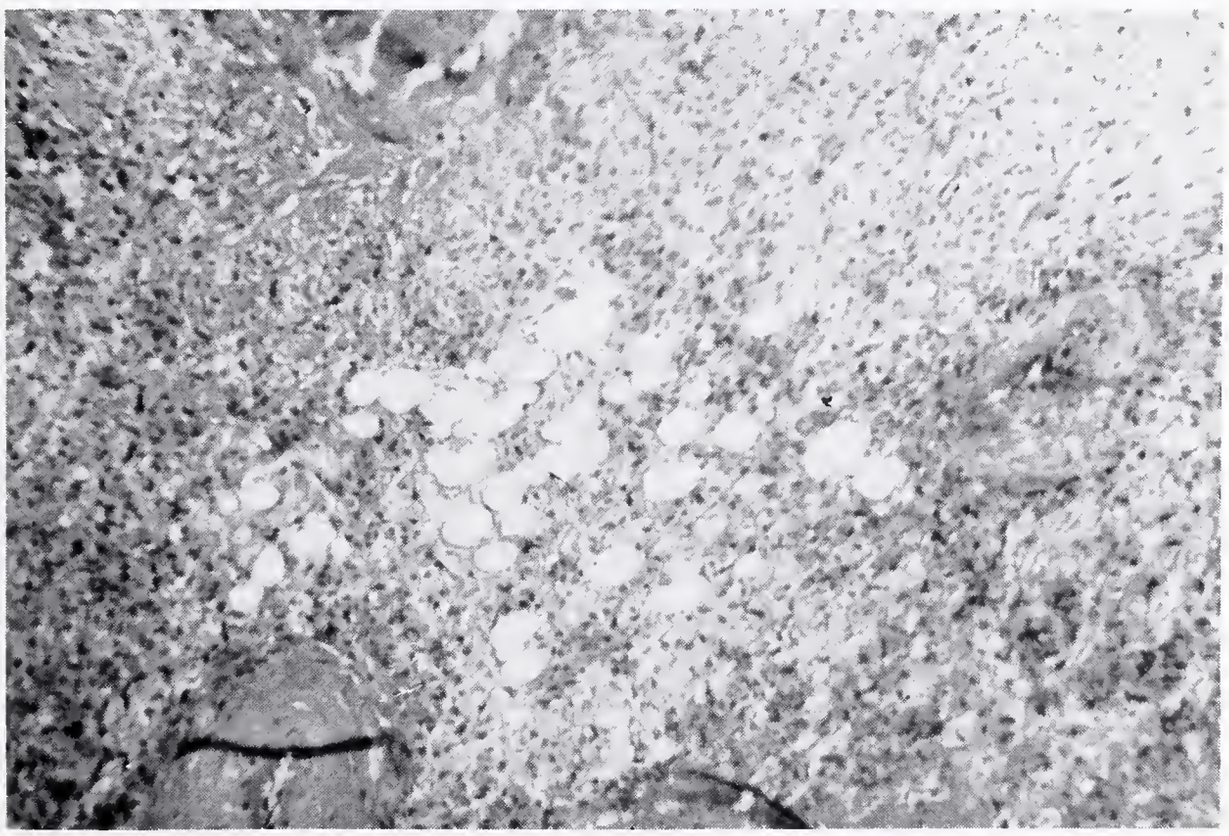
away from their mother on grounds of her incompetence to take care of them. The latter two were placed in adoptive homes and there was reason to believe that they were well and had normal intelligence.

Comment

Angiomyolipoma of the kidney, variously known as renal hamartoma, benign arterioleiomyoma, benign mesenchymoma, and several other terms, is a well known entity; excellent reviews of the subject are available, the most outstanding is by Hajdu and Foote.[1] However, there are few reports of massive hemorrhage from these tumors. Vasko and associates found seven cases of spontaneous massive hemorrhage reported up to 1961, and added one more case.[4] In none of these cases was a correct diagnosis made preoperatively.

It has been stated.[4-6] that angiomyolipoma of the kidney most frequently occurs in association with tuberous sclerosis, although studies by Hajdu and Foote[1] indicate that more of them occur in its absence. It has also been stated that such tumors occurring with tuberous sclerosis are small and asymptomatic, whereas those not so associated are more likely to be large and symptomatic.[1] Details of our case would seem to agree with this thesis. An attempt was made to discover other stigmata of tuberous sclerosis in this woman and her progeny, but the findings were equivocal at best. Progressively more se-

4. All three elements are represented in this section. Hematoxylin and eosin, X 30.



vere mental subnormality occurring in successive generations raises the suspicion that a form of tuberous sclerosis might have existed, but no definitive diagnosis can be made.

The tumor is almost always unilateral, and the majority of patients with this disease are middle-aged women.[7] The significance of this association is doubtful.

The majority of individuals with this tumor are asymptomatic, and the presence of the tumor(s) is only an incidental finding in a patient known to have tuberous sclerosis. When symptoms are present, however, they consist of flank pain and occasionally a palpable mass. Hematuria is uncommon; this is not surprising since the tumor is well demarcated and encapsulated even though it is quite vascular. The patient described herein gave no history of hematuria, and did not have microscopic hematuria.

Preoperative diagnosis has seldom, if ever, been made. This is understandable because of the rarity of the tumor; even in patients with tuberous sclerosis, the tumors are small and seldom produce massive hemorrhage. Failure to suspect the nature of the disease before and—as was the case in this patient—during the operation, results in unnecessary removal of the entire kidney. If the correct diagnosis is made, it may be possible to do a more limited extirpation and thus save healthy portions of the affected kidney. A greater awareness that angiomyolipoma of kidney can cause massive retroperitoneal hemorrhage, availability of a surgeon skilled in performing renal lobectomy, and prudent choice of incision appear to be prerequisites for appropriate handling of this condition. In our case, all three were missing.

Summary

A case of massive spontaneous retroperitoneal hemorrhage from a previously unsuspected angiomyolipoma of the kidney in a 56-year-old woman is described. Comments are made on the clinical features of this rare disease, and comparisons are made between findings in this case and in those reported in the literature. Difficulties in proper diagnosis and management resulting from the rarity of the tumor and consequent lack of familiarity with it are emphasized.

Addendum

The patient recently underwent total thyroidectomy because of nodular goiter producing symptoms of compression. Pathological diagnosis was, "thyroiditis with features of Hashimoto's and Reidel's struma." She is being prepared for hysterectomy because of bleeding from uterine leiomyomata.

References

1. Hajdu SI, Foote FW Jr: Angiomyolipoma of the kidney: report of 27 cases and review of the literature. J Urol 102:396-401, 1969.

2. Inglis K: The nature and origin of smooth muscle-like neoplastic tissue in renal tumors of the tuberous sclerosis complex. Cancer 13:602-611, 1960.

3. Tweeddale DN, Dawe CJ, McDonald JR, et al: Angiolipoleiomyoma of kidney; report of case with observations on histogenesis. Cancer 8:764-770, 1955.

4. Vasko JS, Brockman SK, Bomar RL: Renal angiomyolipoma: a rare cause of spontaneous massive retroperitoneal hemorrhage. Ann Surg 161:577-581, 1965.

5. MacDougall JA: Renal hamartoma causing intraperitoneal haemorrhage. Brit J Urol 32:280-281, 1960.

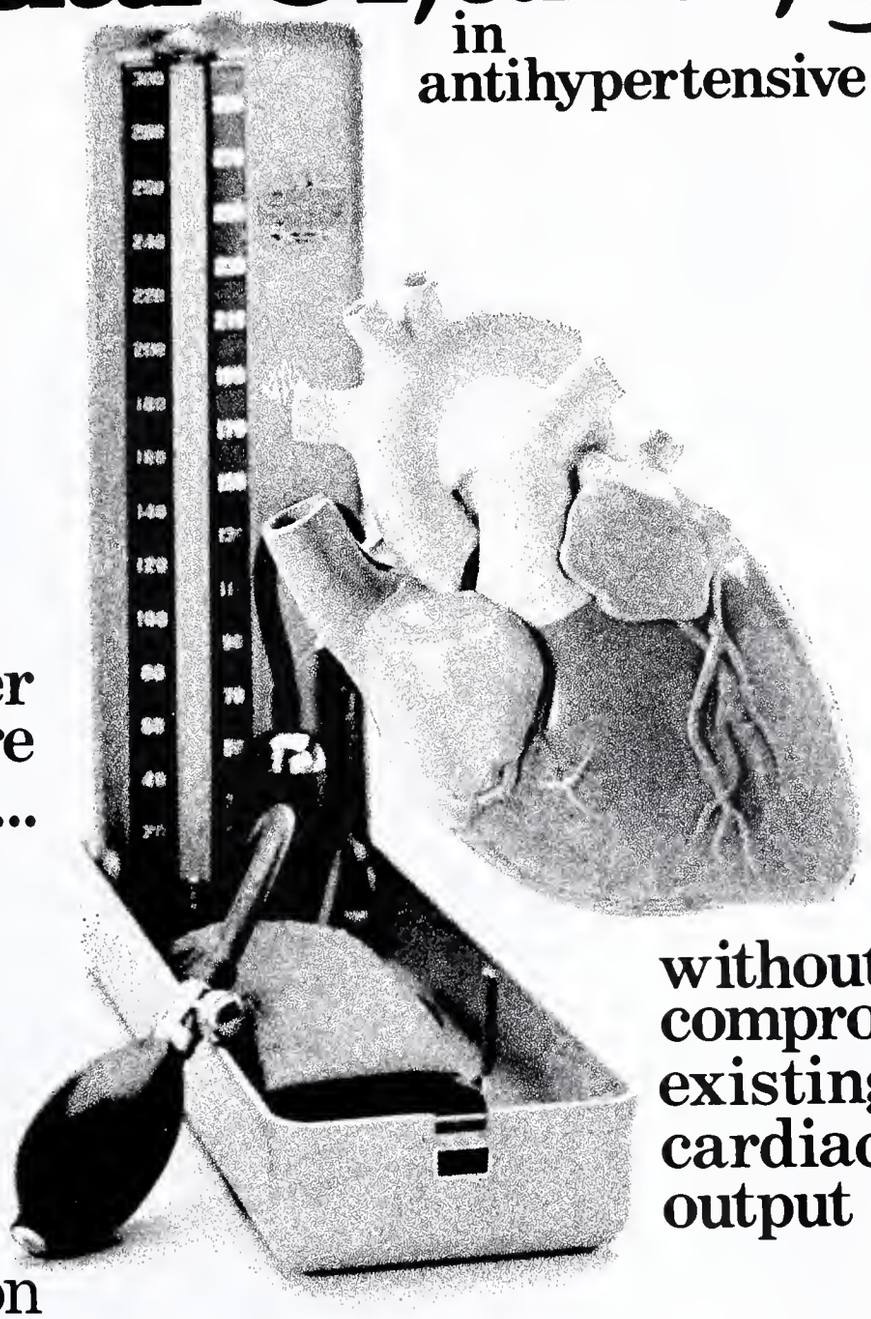
6. Moolten SE: Hamartial nature of tuberous sclerosis complex and its bearing on tumor problem; report of case with tumor anomaly of the kidney and adenoma sebaceum. Arch Intern Med 69:589-623, 1942.

7. Hyman A: Association of hypernephroma with tuberose brain sclerosis and adenoma sebaceum. J Urol 8:317-321, 1922.

Dr Lalani, 400 North Sam Houston, Odessa, TX 79761.

A Dual Challenge

in antihypertensive therapy



to lower blood pressure effectively...

without compromising existing cardiac output

in hypertension

TABLETS: 250 mg, 500 mg, and 125 mg

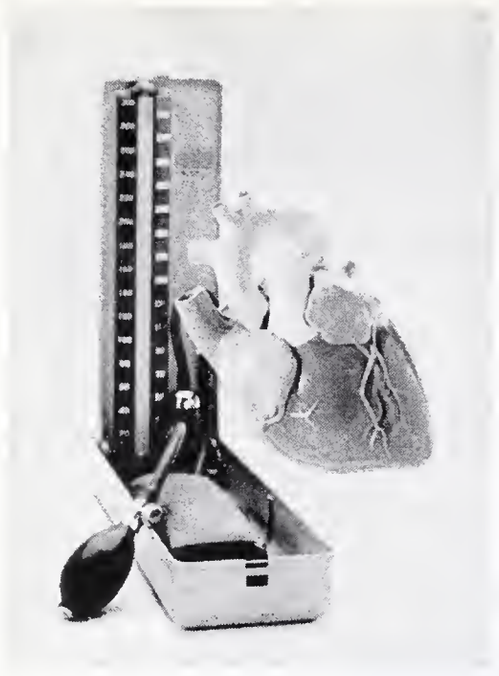
ALDOMET® (METHYLDOPA | MSD)

helps lower blood pressure effectively... usually with no direct effect on cardiac function–cardiac output is usually maintained

ALDOMET is contraindicated in active hepatic disease, hypersensitivity to the drug, and if previous methyldopa therapy has been associated with liver disorders.
It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

For a brief summary of prescribing information, please see following page.

MSD
MERCK SHARP & DOHME



in hypertension

ALDOMET®

(METHYLDOPA|MSD)

helps lower blood pressure effectively... usually with no direct effect on cardiac function– cardiac output is usually maintained

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis; if previous methyldopa therapy has been associated with liver disorders (see Warnings); hypersensitivity.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between 6 and 12 months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at 6 and 12 months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first 3 weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first 2 to 3 months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first 6 to 12 weeks of therapy or whenever an unexplained fever occurs. If fever and abnormalities in liver function tests or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, a reversible reduction of the white blood cell count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur. Patients should be followed carefully to detect side reactions or unusual manifestations of drug idiosyncrasy.

Use in Pregnancy: Use of any drug in women who are or may become pregnant requires that anticipated benefits be weighed against possible risks; possibility of fetal injury can not be excluded.

Precautions: Should be used with caution in patients with history of previous liver disease or dysfunction (see Warnings). May interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, falsely high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. It is important to recognize this phenomenon before a patient with a possible pheochromocytoma is subjected to surgery. Methyldopa is not recommended for patients with pheochromocytoma. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has recurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: *Central nervous system:* Sedation, headache, asthenia or weakness, usually early and transient; dizziness, lightheadedness, symptoms of cerebrovascular insufficiency, paresthesias, parkinsonism, Bell's palsy, decreased mental acuity, involuntary choreoathetotic movements; psychic disturbances, including nightmares and reversible mild psychoses or depression.

Cardiovascular: Bradycardia, aggravation of angina pectoris. Orthostatic hypotension (decrease daily dosage). Edema (and weight gain) usually relieved by use of a diuretic. (Discontinue methyldopa if edema progresses or signs of heart failure appear.)

Gastrointestinal: Nausea, vomiting, distention, constipation, flatus, diarrhea, mild dryness of mouth, sore or "black" tongue, pancreatitis, sialadenitis.

Hepatic: Abnormal liver function tests, jaundice, liver disorders.

Hematologic: Positive Coombs test, hemolytic anemia. Leukopenia, granulocytopenia, thrombocytopenia.

Allergic: Drug-related fever, myocarditis.

Other: Nasal stuffiness, rise in BUN, breast enlargement, gynecomastia, lactation, impotence, decreased libido, dermatologic reactions including eczema and lichenoid eruptions, mild arthralgia, myalgia.

Note: Initial adult dosage should be limited to 500 mg daily when given with antihypertensives other than thiazides. Tolerance may occur, usually between second and third month of therapy; increased dosage or adding a thiazide frequently restores effective control. Patients with impaired renal function may respond to smaller doses. Syncope in older patients may be related to increased sensitivity and advanced arteriosclerotic vascular disease; this may be avoided by lower doses.

How Supplied: Tablets, containing 125 mg methyldopa each, in bottles of 100; Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486 J6AM07(707)

MSD MERCK SHARP & DOHME

AMA Expands Continuing Medical Education Opportunities in 1977.

Now you can choose from 15 regional CME meetings!

Recognizing the importance of continuing medical education to its members, the AMA has greatly expanded its CME programs. During 1977, the AMA will offer 15 regional CME meetings around the country in addition to its scientific programs at both the Annual Convention and Winter Meeting.

The purpose of the regional programs is to make it easier and more convenient for you to continue your medical education by bringing the meetings closer to your hometown and by scheduling them on the weekends to avoid interference with your practice.

All courses are approved by the AMA Council on Continuing Physician Education for Category 1 credit toward an AMA Physician's Recognition Award. A syllabi written by medical school faculties is provided with every course.

Specific information on course location, fees, academic program, faculty, and hotel reservations will be available approximately 2 months before each course date. Please write to address below at that time stating your selection(s). Print name, address, and office phone number.

1977 Regional Schedule

Tulsa, Oklahoma	January 22-23
Birmingham, Alabama	February 5-6
*Lake Tahoe, Nevada	February 11-13
Denver, Colorado	February 19-20
*Tarpon Springs, Florida	March 4-6
Detroit (Southfield), Michigan	March 26-27
New York (Westchester), New York	April 16-17
Houston, Texas	May 15
Hartford, Connecticut	September 10-11
*Lake of the Ozarks, Missouri	September 16-18
Chicago, Illinois	September 24-25
*Hot Springs (Homestead), Virginia	Sept. 30-Oct. 2
*Huron, Ohio	October 7-9
*Honolulu, Hawaii	Oct. 30-Nov. 4
Hershey, Pennsylvania	November 18-19

AMA's 126th Annual Convention

San Francisco, California	June 18-22

AMA's Winter Scientific Meeting

Miami Beach, Florida	December 10-13

AMA Spokesmanship Seminars

Chicago, Illinois (Marriott O'Hare Hotel)	August 13-14 November 12-13

*Courses end at midday for recreation activities

AMA Department of Meeting Services
535 North Dearborn Street
Chicago, Illinois 60610

Depression comes in shades of blue

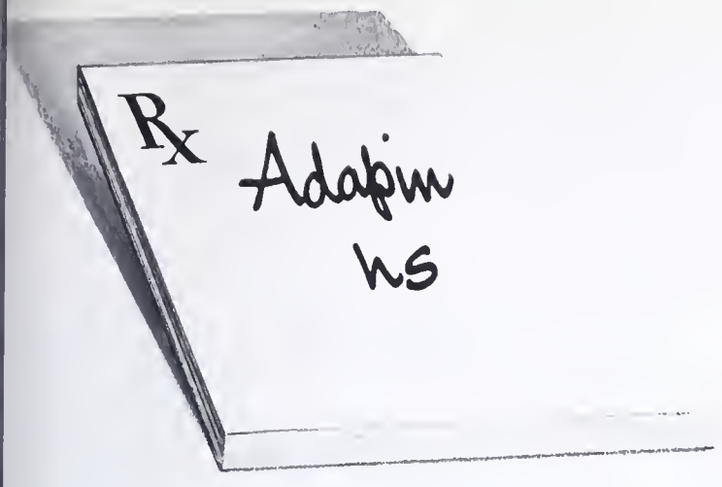
Insomnia is a shade of blue that often accompanies depression

When they see life in shades of blue... help them see life in all its colors

Adapin®

(doxepin HCl)

Please see prescribing information on the right-hand page



Available as

10-mg. capsules

25-mg. capsules

50-mg. capsules

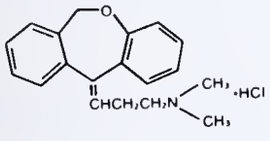
ADAPIN®

(Doxepin HCl)

Prescribing information:

DESCRIPTION

Adapin (doxepin HCl) is an isomeric mixture of N, N-dimethyl-dibenz(b,e) oxepin- △11(6H), γ propylamine hydrochloride.



ACTIONS

Adapin has a variety of pharmacological actions with its predominant action on the central nervous system. While its mechanism of action is not known, studies have demonstrated that it is neither a monoamine oxidase inhibitor nor a primary stimulant of the central nervous system.

INDICATIONS

In controlled clinical evaluations, **Adapin** has shown marked antianxiety and significant antidepressant effects. **Adapin** has been found to be well tolerated even in elderly patients.

Adapin is indicated for the treatment of patients with:

1. Psychoneurotic anxiety and/or depressive reactions.
2. Mixed symptdms of anxiety and depression.
3. Anxiety and/or depression associated with alcoholism.
4. Anxiety associated with organic disease.
5. Psychotic depressive disorders including involutional depression and manic-depressive reactions.

Target symptoms of psychoneurosis that respond particularly well to **Adapin** include: anxiety, tension, depression, somatic symptoms and concerns, insomnia, guilt, lack of energy, fear, apprehension and worry.

Because **Adapin** provides antidepressant as well as antianxiety effects, it is of particular value in patients in whom anxiety masks depression. Patients who have not responded to other antianxiety or antidepressant drugs may benefit from **Adapin.**

In a large series of patients systematically observed for withdrawal symptoms, none were reported—a finding which is consistent with the virtual absence of euphoria as a side effect and the lack of addictive potential characteristic of this type of chemical compound.

CONTRAINDICATIONS

Because **Adapin** has an anticholinergic effect, it is contraindicated in patients with glaucoma or a tendency toward urinary retention.

Use of **Adapin** is contraindicated in patients who have been found hypersensitive to it.

WARNINGS

Usage in Pregnancy—Adapin has not been evaluated in pregnant patients. Therefore, it should not be used during pregnancy unless, in the judgment of the physician, it is essential to the welfare of the patient.

In animal reproduction studies of **Adapin (doxepin hydrochloride),** gross and microscopic examination of the offspring gave no evidence of drug-related teratogenic effect. Following doses of up to 25 mg./kg./day for 8 to 9 months, no changes were observed in the number of live births, litter size, or lactation. A decreased rate of conception was observed when male rats were given 25 mg./kg./day for prolonged periods—an effect which has occurred with other psychotropic drugs and has been attributed to drug effect on the central and/or autonomic nervous systems.

Usage in Children—The use of **Adapin** in children under 12 years of age is not recommended, because safe conditions for its use have not been established.

MAO Inhibitors—Serious side effects and even death have been reported following the concomitant use of certain drugs with MAO inhibitors. Therefore, MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with **Adapin.** The exact length of time may vary and is dependent upon the particular MAO inhibitor being used, the length of time it has been administered, and the dosage involved.

PRECAUTIONS

Drowsiness may occur with **Adapin;** therefore, patients should be warned of its possible occurrence and cautioned against driving a motor vehicle or operating hazardous machinery while taking the drug.

Patients should also be cautioned that the effects of alcoholic beverages may be increased.

Since suicide is an inherent risk in depressed patients and remains a risk through the initial phases of improvement, depressed patients should be closely supervised.

Although **Adapin** has shown effective tranquilizing activity, the possibility of activating or unmasking latent psychotic symptoms should be kept in mind.

Compounds structurally related to **Adapin** can block the effects of guanethidine and similarly acting compounds. However, at the usual clinical dosages, 75 mg. to 150 mg. per day, **Adapin** has been given concomitantly with guanethidine without blocking its antihypertensive effect. But at dosages of 300 mg. per day or higher, **Adapin** has exerted a significant blocking effect.

Adapin, like other structurally related psychotropic drugs, potentiates norepinephrine response in animals. But this effect has not been observed with **Adapin** in humans, which is in accord with the low incidence of tachycardia reported clinically.

ADVERSE REACTIONS

Anticholinergic Effects: Dry mouth, blurred vision and constipation have been reported. These are usually mild, and often subside as therapy is continued or dosage reduced.

Central Nervous System Effects: Drowsiness has been observed. It usually occurs early in the course of therapy and tends to subside as therapy continues. (See Dosage and Administration section.)

Cardiovascular Effects: Tachycardia and hypotension have been reported infrequently.

Other infrequently reported adverse effects include extrapyramidal symptoms, gastrointestinal reactions, secretory effects (such as increased sweating), weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash, and pruritus.

DOSAGE AND ADMINISTRATION

In most patients with mild to moderate anxiety and/or depression: 10 mg. to 25 mg. t.i.d. to start. A starting dosage of 10 mg. t.i.d. for a period of four days may reduce the initial drowsiness experienced by some patients, and may be tried in cases where drowsiness is clinically undesirable. Decrease or increase the dosage at appropriate intervals according to individual response. Usual optimum dosage is 75 mg. to 150 mg. per day.

In some patients with mild symptomatology or emotional symptoms accompanying organic disease, dosage as low as 25 mg. to 50 mg. per day has provided effective control.

In more severe anxiety and/or depression: 50 mg. t.i.d. may be required to start—if necessary, gradually increase to 300 mg. per day. Additional effectiveness is rarely obtained by exceeding 300 mg. per day.

Although optimal antidepressant response may not be evident for two to three weeks, antianxiety activity is rapidly apparent.

OVERDOSAGE

Symptoms—An increase of any of the reported adverse reactions, primarily excessive sedation and anticholinergic effects such as blurred vision and dry mouth. Other effects may be: pronounced tachycardia, hypotension and extrapyramidal symptoms.

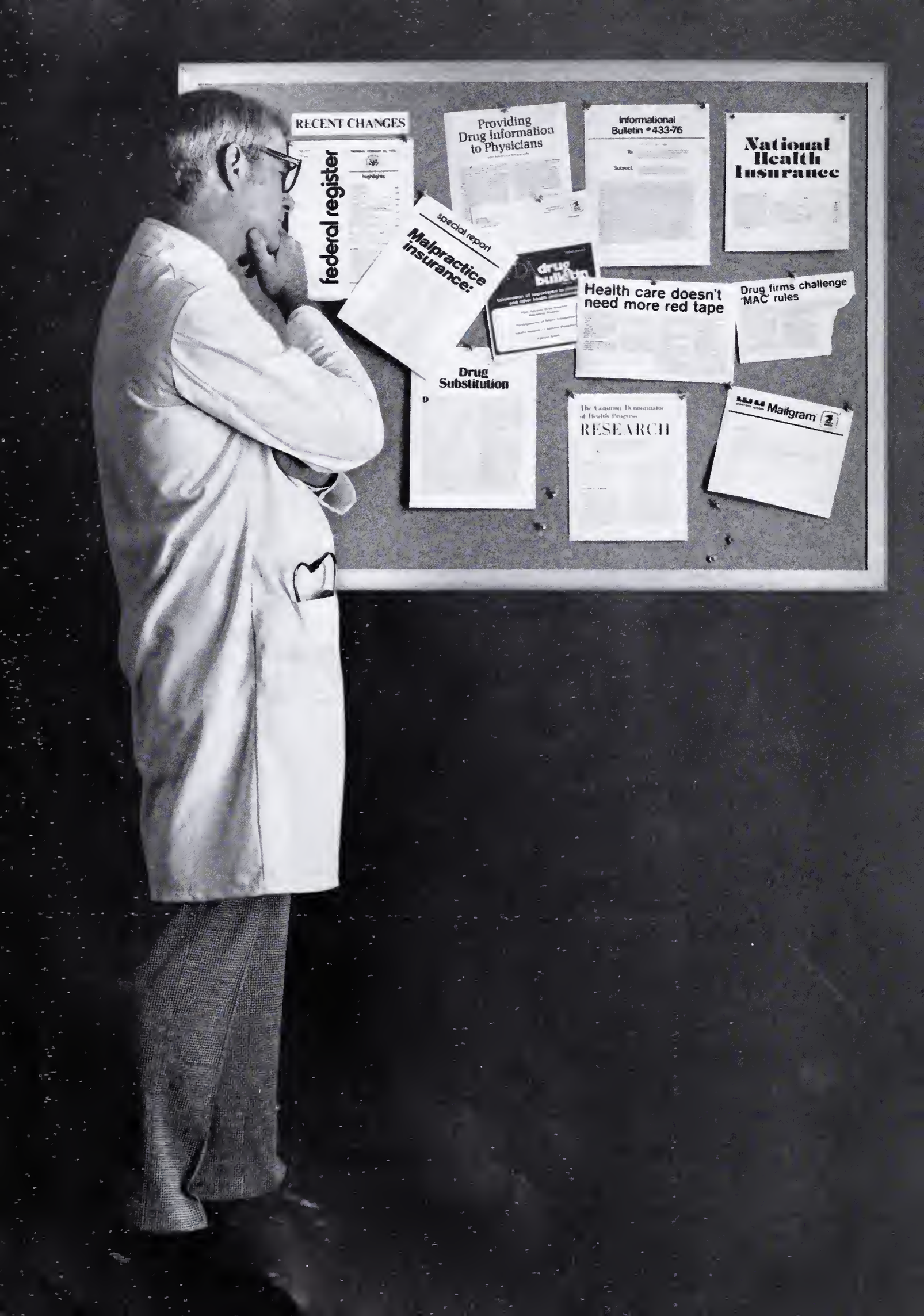
Treatment—Essentially symptomatic; supportive therapy in the case of hypotension and excessive sedation.

HOW SUPPLIED

Each capsule contains doxepin, as the hydrochloride, 10 mg. (NDC 0018-0356), 25 mg. (NDC 0018-0357), and 50 mg. (NDC 0018-0358) capsules in bottles of 100 and 1000.

PENNWALT

Pennwalt Prescription Products
Pharmaceutical Division
Pennwalt Corporation
Rochester, New York 14603


RECENT CHANGES
federal register
highlights
Providing Drug Information to Physicians
Informational Bulletin #433-76
Subject
National Health Insurance
special report
Malpractice insurance:
drug bulletin
Health care doesn't need more red tape
Drug firms challenge 'MAC' rules
Drug Substitution
RESEARCH
Mailgram

WELCOME TO HOUSTON

1977 ANNUAL SESSION MAY 12-15, HOUSTON
TEXAS MEDICAL ASSOCIATION

FEATURING

52 GUEST SPEAKERS plus 350 special and TMA-member speakers

21 SECTION PROGRAMS: Allergy, Colon and Rectal Surgery, Digestive Diseases, Diseases of the Chest, Family Practice, Internal Medicine, Neurology, Neurological Surgery, Nuclear Medicine, Obstetrics and Gynecology, Ophthalmology, Otolaryngology, Pathology, Pediatrics, Physical Medicine and Rehabilitation, Plastic, Reconstructive and Maxillofacial Surgery, Psychiatry, Public Health, Radiology, Surgery, Urology.

AMA-TMA POSTGRADUATE COURSES Scheduled Sunday, May 15, 8 a.m.-1 p.m. Each course acceptable for five hours Category 1 credit, AMA Physician's Recognition Award. Fee: $55. (Registration information will be sent to membership in separate mailing.)

Acid-Base, Fluid and Electrolyte Balance • Cardiovascular Disease—Diagnosis, Management of Acute Patient • Office Dermatology • Office Gynecology • Office Orthopaedics • Pediatric Emergencies

20 CURBSTONE CONSULTATIONS Person-to-person conversational discussions of cases and problems of general medical interest.

13 CONTINENTAL BREAKFAST PRESENTATIONS Join guest speakers for coffee, rolls, and short lectures Friday and Saturday mornings. Then participate in the informal half-hour discussion period following.

30 SPECIALTY SOCIETY PROGRAMS • 8 SPECIAL COMMITTEE SYMPOSIUMS • 160 SCIENTIFIC AND TECHNICAL EXHIBITS • FORUM OF ORIGINAL RESEARCH • PHYSICIANS' AND SPOUSES' ART EXHIBITION

SPORTS/ENTERTAINMENT Golf, Tennis, Fraternity and Alumni Parties, Class Reunions.

An Evening at the Cabaret. A Dinner Theater for members and guests of TMA Friday, May 13. Dinner in the Shamrock Hilton Emerald Room at 8 p.m. A musical at 9:30 p.m. in the hotel's new Cabaret Theater.

ADVANCE REGISTRATION FORM—FILL OUT BOTH SIDES AND MAIL TODAY

Save time and effort by registering in advance. Fill out the card at the right, mail it to TMA, and your registration packet will be waiting for you. There is no registration fee for TMA members. Registration materials may be picked up at the Shamrock Hilton Hotel, the Houston Marriott Hotel, or the Holiday Inn Medical Center.

A form for ordering tickets to the General Meeting Luncheons, the Dinner Theater, and other events is located on the back of this advance registration card. Save time by ordering your tickets now.

NAME_____

ADDRESS_____

CITY OF RESIDENCE_____

SPECIALTY_____

CONVENTION ADDRESS_____

_____

COUNTY SOCIETY_____

I shall pick up my convention materials at:

☐ Shamrock Hilton Hotel

☐ Houston Marriott Hotel

☐ Holiday Inn Medical Center

Mail to: Texas Medical Association
1801 North Lamar Blvd., Austin, Texas 78701

TO SAVE TIME AND ASSURE YOUR TICKET RESERVATION, USE ADVANCE TICKET ORDER FORM ON OTHER SIDE AND RETURN PRIOR TO APRIL 25.

PLEASE CHECK THE APPROPRIATE SPACES BELOW

☐ MEMBER PHYSICIAN
☐ NON-MEMBER PHYSICIAN
☐ INTERN OR RESIDENT
☐ MEDICAL STUDENT
☐ MEMBER SPEAKER
☐ SCIENTIFIC EXHIBITOR
☐ PRESIDENT, COUNTY MEDICAL SOCIETY
☐ DELEGATE
☐ ALTERNATE DELEGATE
☐ COUNCILOR
☐ VICE COUNCILOR
☐ TMA COUNCIL CHAIRMAN
☐ GUEST REPRESENTING

_____

_____

_____

ADVANCE REGISTRATION FORM

CONTINENTAL BREAKFAST PRESENTATIONS

Reserve your tickets with card below.

Friday, May 13, 8:15-9:30 a.m.

1. HEADACHES: THEIR DIAGNOSIS AND TREATMENT
   Abe B. Baker, M.D.
   Minneapolis, Minnesota
2. THE STATUS OF T AND A, 1977
   Charles D. Bluestone, M.D.
   Pittsburgh, Pennsylvania
3. OBESITY
   George F. Cahill, Jr., M.D.
   Boston, Massachusetts
4. MANAGEMENT OF TUMORS OF THE MAJOR SALIVARY GLANDS
   Edgar L. Frazell, M.D.
   San Antonio, Texas
5. WHAT'S NEW IN ANTIBIOTIC THERAPY?
   Robert G. Petersdorf, M.D.
   Seattle, Washington
6. TRANSCUTANEOUS STIMULATION AND OTHER METHODS OF PAIN CONTROL, INCLUDING ACUPUNCTURE
   George W. Waylonis, M.D.
   Columbus, Ohio

Saturday, May 14, 8:15-9:30 a.m.

7. DIFFERENTIAL DIAGNOSIS OF PIGEON-TOEIN IN CHILDREN
   Eugene E. Bleck, M.D.
   Palo Alto, California
8. COMMON PROBLEMS IN OBSTETRICAL ANESTHESIA
   Winnie J. Crump, M.D., Houston, Texas, Moderat
   George B. Jackson, M.D., Houston, Texas
   Frank H Morriss, Jr., M.D., Houston, Texas
   Frank Moya, M.D., Miami Beach, Florida
9. SOME ASPECTS OF PULMONARY INFECTIONS
   Sydney M. Finegold, M.D., Los Angeles, Californ
   Robert G. Petersdorf, M.D., Seattle, Washington
10. CONTROVERSIES, MANAGEMENT OF COLON AN RECTAL CARCINOMA
    Donald M. Gallagher, M.D.
    San Francisco, California
11. PRINCIPLES OF RADIOIMMUNOASSAY
    Phillip L. Howard, M.D.
    Burlington, Vermont
12. BACTEREMIA IN FEBRILE CHILDREN
    Jerome O. Klein, M.D
    Boston, Massachusetts
13. MONITORING AND ADJUNCTIVE CARE OF THE CRITICALLY-INJURED OR ILL PATIENT
    G. Tom Shires, M.D.
    New York, New York

USE THESE FORMS TO REGISTER IN ADVANCE, BUY TICKETS AND MAKE HOTEL RESERVATION

HAVE YOUR TICKETS READY FOR YOU WHEN YOU GET TO HOUSTON

Avoid the lines, the last minute rush, and the possibility of missing out on the TMA functions list ed below. Fill out the advance ticket order form, mail it to TMA with your check, and your ticket will be waiting for you.

MAIL TO: TEXAS MEDICAL ASSOCIATION
1801 NORTH LAMAR BOULEVARD, AUSTIN, TEXAS 78701

NUMBER OF TICKETS	FUNCTIONS AND PRICE (inclusive of tax and gratuity)	AMOUNT
_____	AN EVENING AT THE CABARET (DINNER THEATER)—Friday (May 13) @ $20 per person	_____
_____	GENERAL MEETING LUNCHEON—Friday (May 13) @ $8.25 per person	_____
_____	GENERAL MEETING LUNCHEON—Saturday (May 14) @ $8.25 per person	_____
_____	CONTINENTAL BREAKFAST PRESENTATIONS—Friday (May 13) @ $1.50 per person	_____
	1.___ 2.___ 3.___ 4.___ 5.___ 6.___ (see list—select one)	
_____	CONTINENTAL BREAKFAST PRESENTATIONS—Saturday (May 14) @ $1.50 per person	
	7.___ 8.___ 9.___ 10.___ 11.___ 12.___ 13.___ (see list—select one)	_____
	CHECK ENCLOSED FOR TOTAL	$_____

BE SURE TO FILL OUT THE ADVANCE REGISTRATION FORM ON THE OTHER SIDE AND RETURN PRIOR TO APRIL 25.

ADVANCE REGISTRATION FORM

GENERAL MEETING LUNCHEONS

Friday, May 13, 12:15 p.m., Shamrock Hilton Hotel. Luncheon speaker will be Edward Teller, Ph.D., LL.D., physicist, Stanford, California.

Saturday, May 14, 12:15 p.m., Shamrock Hilton Hotel. Featured speaker will be The Honorable Paul G. Rogers, Congressman, House of Representatives, Washington, D. C.

AN EVENING AT THE CABARET

Join your frinds for TMA's own special Dinner Theater Friday, May 13. Have dinner in the famous Emerald Room of the Shamrock Hilton at 8 p.m. and see a lively musical in the hotel's new Cabaret Theater at 9:30 p.m.

CONTINENTAL BREAKFAST PRESENTATIONS

Friday, May 13, and Saturday, May 14, 8:15-9:30 a.m., Shamrock Hilton Hotel and the Holiday Inn Medical Center. Attendance is limited. Have coffee and rolls with a guest speaker, then participate in an informal discussion period.

HOUSING BUREAU USE ONLY

OFFICIAL HOUSING REQUEST

MAIL TO:

HOUSING BUREAU
1006 Main — Suite 1101
Houston, TX 77002

TEXAS MEDICAL ASSOCIATION
110th Annual Session • May 12-15, 1977
Houston, Texas

(See location of facilities on back)

PARTICIPATING HOTELS AND CODES

HOTEL CODE — HOTEL

SH .....Shamrock Hilton Hotel
Scientific Sessions and Exhibits

Singles	$ 29-43
Doubles	$ 41-55
Twins	$ 41-55
Suites	$ 90 up 2-rm
	$140 up 3-rm

H .....Houston Marriott Hotel
House of Delegates, Boards, Councils, Committees

Singles	$ 29-39
Doubles	$ 39-49
Twins	$ 45-49
Suites	$104 2-rm
	$148 3-rm

FILLED

W .....The Warwick Hotel
Auxiliary Meetings

Singles	$ 30-45
Doubles	$ 45-55
Twins	$ 45-55
Suites	$100 up 2-rm

HMC.....Holiday Inn Medical Center
Scientific Sessions

Singles	$ 24
Doubles	$ 28
Twins	$ 28

TI.....Tidelands Motor Inn

Singles	$ 24-28
Doubles	$ 26-31
Twins	$ 25-38
Suites	$ 55 up 2-rm

TMI.....Tides II Motor Inn

Singles	$ 26-32
Doubles	$ 29-35
Twins	$ 36-42
Suites	$ 55 up 2-rm
	$125 3-rm

• PLEASE READ CAREFULLY •

- Please PRINT or TYPE all items to assure accuracy.
- Complete each part below in detail for correct and rapid computer processing.
- Only one room per form.
- ALL confirmations will be sent to individual indicated in Part I.

PART I

INSTRUCTIONS: Complete requested data using abbreviations as necessary.

(NAME OF PERSON REQUESTING ROOM/S)

(LAST) (FIRST NAME)

(NAME OF COMPANY OR FIRM)

(STREET ADDRESS OR P. O. BOX NUMBER)

(CITY) (STATE) (ZIP — U.S.A.)

(COUNTRY) (Area Code) (PHONE NUMBER)

PART II

INSTRUCTIONS: 1. Select three hotels from the list provided on the left side of this form, then enter the appropriate code letters in the boxes below.

FIRST CHOICE	SECOND CHOICE	THIRD CHOICE
HOTEL CODE	HOTEL CODE	HOTEL CODE

PART III

INSTRUCTIONS:
1. **Print** or **type** names of all persons occupying room.
2. Check type room desired (single, twin, etc.).
3. Indicate arrival and departure dates.

GUEST NAME/S (PRINT LAST NAME FIRST)	P+1 — Parlor & one bedroom P+2 — Parlor & two bedrooms	
1.	CHECK ONE	ARR. DATE _____ DEP. DATE _____
2.	☐ SINGLE ☐ P+1	ARRIVAL TIME _____ ☐ AM ☐ PM (Check One)
3.	☐ DOUBLE	**NOTE:** ROOM WILL NOT BE HELD AFTER 6 P.M. UNLESS PAYMENT IS GUARANTEED FOR FIRST NIGHT. HOTEL MAY REQUIRE DEPOSIT.
4.	☐ TWIN ☐ P+2	

FOR USE OF ASSN. ONLY

ROOM RESERVATIONS MUST BE RECEIVED BY APRIL 25. CONFIRMATION CANNOT BE GUARANTEED ON RESERVATIONS RECEIVED AFTER THAT DATE.

1. **SHAMROCK HILTON HOTEL**
   Scientific Sessions and exhibits
2. **HOUSTON MARRIOTT HOTEL**
   House of Delegates, Boards, Councils, Committees
3. **THE WARWICK HOTEL**
   Auxiliary Meetings
4. **HOLIDAY INN MEDICAL CENTER**
   Scientific Sessions
5. **TIDELANDS MOTOR INN**
6. **TIDES II MOTOR INN**

THERE ARE A LOT OF PEOPLE GETTING BETWEEN YOU AND YOUR PATIENT.

Medicine today is in the spotlight, subjected to all kinds of scrutiny. Your control over patient therapy is being monitored, judged and occasionally abrogated, sometimes by unknown third parties.

The worry is that in the wake of this focus, the relationship between you and your patient will be weakened, without offsetting benefits. Consider three examples:

Drug substitution In most states, pharmacy laws, regulations or professional custom stipulate that your non-generic prescriptions be filled with the precise products you prescribe. But in the last five years, a dozen or more State laws have been changed, permitting the pharmacist in most cases to select a product of the same generic drug to fill any prescription.

Ironically, this dilution of physician control has taken place against a background of growing evidence that purportedly equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA itself says it has not enforced the same standards for hundreds of "follow-on" products that it had applied to the original NDA approvals. Thus physician control over patient therapy is being eroded with a risk that patients may be exposed to drugs of uncertain quality.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant savings has been produced.

MAC Maximum Allowable Cost, MAC for short, is a Federal regulation designed to cut the Government's drug bill by setting price ceilings for drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the Government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right. Practicing doctors will have little to say about administration of the program, since Government will have absolute authority to make its choices stick.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to your patients: The cost of the research is more than ten times what it was, per product, in 1962; and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present approval process contributes to needless delay of needed therapy. That's why the increased efficiency of the drug approval process is vital to all our futures.

If these issues concern you, we suggest that you make your voice heard—among your colleagues and your representatives in State legislatures and in Washington.

It could make a difference in your practice tomorrow.

P·M·A
Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

TEXAS REPRESENTATIVES

A. F. Ennis, Jr. and B. C. Crim, Suite 210, 712 N. Washington, Dallas 75246 — Telephone (214) 821-4640
W. L. Kirk, 1508 Hermann Prof. Bldg., Houston 77030 — Telephone (713) 797-9835
M. C. Rollins, 408 GPM Bldg., South Tower, San Antonio 78216 — Telephone (512) 344-5901

KELSEY-SEYBOLD CLINIC

TEXAS MEDICAL CENTER ● 6624 FANNIN STREET ● HOUSTON, TEXAS 77030 ● AC (713) 797-1551

INTERNAL MEDICINE

Allergy
C. W. Ewing, M.D., F.A.C.A.

Arthritis and Rheumatic Diseases
J. W. Kemper, M.D., F.A.C.P.
M. S. Fischer, M.D.

Cardiology
E. F. Beard, M.D., F.A.C.P.
D. D. Goulden, M.D.
M. J. Mihalick, M.D.

Endocrine and Metabolic Diseases
M. P. Kelsey, M.D., F.A.C.P.
A. E. Leiser, M.D., F.A.C.P.
P. K. Champion, Jr., M.D., F.A.C.P.

Gastrointestinal Diseases, Endoscopy
J. R. Kelsey, Jr., M.D., F.A.C.P.
P. S. Bentlif, M.D., F.A.C.P.
R. D. Eichhorn, M.D., F.A.C.P.
F. S. O'Neil, M.D., F.A.C.P.
J. W. McBee, M.D., F.A.C.P.

General Internal Medicine
G. E. Burke, M.D.
C. F. Taboada, M.D., F.A.C.P.
N. H. Nauert, Jr., M.D.
G. G. Bourianoff, M.D.

Hematology
J. B. Bart, M.D., F.A.C.P.

Infectious Diseases
S. Riggs, M.D., F.A.C.P.

Nuclear Medicine
D. E. Mouton, M.D.

Oncology
E. N. Root, M.D.

Pulmonary Diseases, Bronchoscopy
S. P. Fischer, M.D., F.A.C.P.
B. D. Walker, M.D.

DERMATOLOGY

W. M. Fraser, M.D., F.A.A.D.
D. W. Owens, M.D., F.A.A.D.

GENERAL & THORACIC SURGERY

Surgical Endoscopy & Colonoscopy
W. D. Seybold, M.D., F.A.C.S.
J. D. McMurrey, M.D., F.A.C.S.
J. L. Doggett, M.D., F.A.C.S.
M. F. Appel, M.D., F.A.C.S.

NEUROLOGY

R. R. Pierce, M.D., F.A.A.N.
W. R. Seybold, M.D.

OBSTETRICS & GYNECOLOGY

M. L. Cody, M.D., F.A.C.S., F.A.C.O.G.
W. A. Johnson III, M.D., F.A.C.O.G.

OCCUPATIONAL & PREVENTIVE MEDICINE

M. B. Johnston, M.D., F.A.C.Pr.M.
H. B. Elwell, Jr., M.D.
R. M. Fenno, M.D., F.A.C.P.
F. A. Goss, M.D.
W. R. Hawkins, M.D., F.A.C.Pr.M.
W. R. Hein, M.D.
L. A. Herrmann, M.D.
G. F. Kelly, M.D., F.A.C.Pr.M.
J. Mackay, M.D.
C. A. Owen, M.D., F.A.C.S.
C. G. Petry, M.D.
B. W. Prior, M.D., F.A.C.Pr.M.
N. A. Tadros, M.D., F.A.C.Pr.M.
A. M. Wyss, M.D., F.A.C.Pr.M.

OPHTHALMOLOGY

H. E. Wahlen, M.D., D.A.B.O.
J. E. Key, II, M.D.

ORTHOPEDIC SURGERY

R. A. Fulford, M.D., F.R.C.S. (C)
T. H. Crouch, M.D., F.A.C.S.

OTOLARYNGOLOGY

J. C. Dickson, M.D., F.A.C.S.
J. L. Smith, M.D., F.A.C.S.
L. P. Conrad, M.D.

PATHOLOGY

R. A. Jordan, M.D., F.A.S.C.P.

PEDIATRICS

Rheumatology
E. J. Brewer, Jr., M.D., F.A.A.P.

Allergy and Pulmonary Diseases
C. W. Ewing, M.D., F.A.A.P.

Gastroenterology
G. D. Ferry, M.D., F.A.A.P.

General Pediatrics and Consultation
F. J. Boland, M.D.
R. M. Thaller, M.D.
K. C. Pinckard, M.D.

PSYCHIATRY

C. G. Cochran, M.D.
R. Daichman, M.D.

RADIOLOGY

R. J. Kurth, M.D., F.A.C.R.
E. G. Linares, M.D.
P. Raphael, M.D.

UROLOGY

D. W. Pranke, M.D., F.A.C.S.
F. M. Fry, M.D.

DENTISTRY

J. W. Orr, D.D.S.
D. L. McClung, D.D.S.

SPEECH PATHOLOGY & AUDIOLOGY

D. R. Fox, Ph.D.
J. W. Porter, M.A.
N. Shulak, M.A.

EXECUTIVE DIRECTOR

J. A. Bakken, F.A.C.M.G.A.

K-S POST OAK

Post Oak Tower Building, Suite 385
5051 Westheimer
Houston, Texas 77027
(713) 622-8340

K-S WEST

1900 Yorktown, Houston, Texas
77024 (713) 622-8211

K-S DOWNTOWN

Two Houston Center, Suite P-310
909 Fannin Street, Houston, Texas
77002 (713) 654-4401

Leptospirosis in West Texas

Evret C. Newman, DVM; George E. Pool, BS

Introduction

Recent serological examination of humans and 16 species of sylvatic animals in Public Health Region 3 revealed an infection rate for leptospirosis exceeding the levels indicated by existing information. The infection rate in humans was more than 6.5 times the rate reported for the overall United States population. Evidence of infection of humans and animals by 14 serogroups of *Leptospira interrogans* was found with microscopic agglutination titers ranging from 1:50 to 1:6,400.

History

Affecting an ever-expanding spectrum of known hosts over a world-wide range, leptospirosis deserves its designation as the most widespread contemporary zoonosis.[1] The reported infection rate of leptospirosis in the general United States population is 2.6% and this figure is believed to be below the actual prevalence.[2] The actual number of people infected with *Leptospira interrogans* in Texas is unknown; an average of 5.75 cases per year have been reported since human leptospirosis surveillance began in 1964.[3-5] No human leptospirosis has been reported from the six western counties of Texas Public Health Region 3[6] (Fig 1). However, from 1965 through 1975 an annual average of 6.73 cases of leptospirosis in domestic animals have been reported from the same six counties. These cases have occurred in five different species of domestic animals.[7]

The clinical presentation of human and animal leptospirosis may be so protean in nature as to make the diagnosis extremely difficult. In humans leptospirosis varies from a moderate influenza-like illness with fever, headache, and myalgia, with occasional symptoms of hepatic involvement, to the classic Weil's disease, the latter being far from common.[1,2,5,8] In domestic animals, severity of leptospirosis may range from the asymptomatic cases through those exhibiting fever, icterus, hemoglobinuria, abortion, and death.[9,10]

The consistent reporting of clinical leptospirosis in animals, the absence of reported cases in humans, and the probability that most cases of human leptospirosis go undiagnosed[11] indicated a need to examine the prevalence of this zoonosis in Public Health Region 3.

Investigation

The most widely used serological test for leptospirosis is the microscopic agglutinaiton test utilizing live antigen. Using this test, titers may be measured for months or years following leptospiral infection.[12] Since the object of the project was to determine the prevalence of leptospirosis in the population regardless of the stage of individual infections, the microscopic agglutination test conducted by the Center for Disease Control, Atlanta, Ga, was ideal.

From September 1974 through June 1975, a total of 905 individual human blood samples were obtained from hospitals located within Public Health Region 3. Such a collection procedure does not result in a biased sample concerning the prevalence of leptospirosis.[8] Of the 905 sera examined, 155 were positive for one or more serogroups (Fig 2). This infection rate of 17.13% is considerably above the 2.6% given earlier for the population of the US. Of the 155 positive sera, 33 (21.29%) were positive to two serogroups and 6 (3.87%) were positive to three serogroups. It has been reported that known infected individuals may have negative

1. Public Health Region 3 of the Texas Department of Health Resources.

serologic tests;[13] therefore, the actual prevalence of leptospirosis in humans in the western six counties of Texas may be higher than 17.13%. This is significant when viewed in the total absence of reported cases.

Animal sera obtained from October 1974 through November 1975, totaling 130 individual specimens from 16 species, were examined for serological evidence of leptospirosis (Fig 3). Sera were obtained from nondomestic animals in order to avoid any involvement with positive titers resulting from vaccination. Of the 130 sera collected, 41 (31.54%) were positive for one or more serogroups (Fig 4). As is true in humans, leptospiral antibodies cannot always be detected in known-infected wild animals[9,14] and the prevalence may be even greater than 31.54%. In the 41 positive sera, 4 (9.76%) were positive to two serogroups, 2 (4.88%) were positive to three serogroups, and 2 (4.88%) were positive to four serogroups.

While both the human and sylvatic animal sera exhibited serological evidence of infection by 12 serogroups, the serogroups were not identical. No evidence of human infection by Celledoni or Grippotyphosa serotypes was found and the animal sera contained no specimens positive for Bataviae or Hebdomadis. There were no observable differences in the sex ratios of the two total sample groups and the positive sera from each.

2. Serogroups found in human sera.

Serogroup	Number of Sera Positive	Titer Range Low	High
Sherman	78	1:50	1:6400
Cynopteri	49	1:50	1:200
Icterohaemorrhagiae	31	1:50	1:800
Autumnalis	20	1:50	1:800
Andaman	5	1:50	1:50
Australis	5	1:50	1:200
Tarassovi	4	1:50	1:100
Pyrogenes	3	1:50	1:1600
Ballum	2	1:100	1:200
Hebdomadis	2	1:50	1:100
Bataviae	1	1:50	--
Canicola	1	1:800	--

3. Animal sera examined.

Species	Total Individual Sera Examined	Total Sera Positive for One or More Serogroups
Coyote *(Canis latrans)*	35	12
Gray fox *(Urocyon cinereoargenteus)*	27	5
Raccoon *(Procyon lotor)*	24	7
Bobcat *(Lynx rufus)*	11	6
Skunk *(Mephitis mephitis)*	6	1
Jackrabbit *(Lepus californicus)*	5	2
Porcupine *(Erethizon dorsatum)*	5	4
Feral cat *(Felis domesticus)*	2	2
Javelina *(Pecari tajacu)*	2	1
Cougar *(Felis concolor)*	1	1
Swift fox *(Vulpes macrotis)*	1	0
Mule deer *(Odoeoileus hemionus)*	1	0
Bat *(Antrozous pallidus)*	3	0
(Tadarida mexicana)	2	0
(unknown)	1	0
Cottontail rabbit *(Sylvilagus auduboni)*	1	0
Ringtail *(Bassaricus astutus)*	2	0
Badger *(Taxidea taxus)*	1	0

4. Serogroups found in animal sera.

Serogroup	Number of Sera Positive	Titer Range Low	High
Autumnalis	12	1:50	1:1,600
Icterohaemorrhagiae	11	1:50	1:200
Tarassovi	8	1:50	1:200
Celledoni	7	1:50	1:100
Cynopteri	5	1:50	1:100
Andaman	3	1:50	1:50
Grippotyphosa	3	1:100	1:3,200
Ballum	2	1:50	1:50
Pyrogenes	2	1:50	1:100
Sherman	2	1:50	1:200
Canicola	1	1:6400	--
Australis	1	1:50	--

Conclusion

The demonstration of serological evidence of human leptospirosis and of a sylvatic reservoir of the disease in the west six counties of Texas indicates a need for increased awareness. As more people and their domestic animals come in contact with sylvatic animals through various recreational pursuits, the probability of exposure to leptospirosis increases.[15] The continuing development in this area of arid lands for private homes and businesses also contributes to the chances for transmission of this disease.

Acknowledgement

Ms Catherine R. Sulzer, CDC, assisted with the serological examinations, and Mr Jodie Webb, US Fish & Wildlife Service, assisted with obtaining animal sera.

References

1. Turner LH: Leptospirosis I. Trans Roy Soc Trop Med Hyg 61:842-855, 1967.

2. Weidner DR: Leptospirosis—a review. Del Med J 46:181-188.

3. Center for Disease Control: Leptospirosis Surveillance, Annual Summary 1974, Issued September 1975. DHEW Publication No. (CDC) 76-8202.

4. Texas Morbidity This Week: Texas Department of Health Resources, 1964-1975.

5. Barkin RM: Human leptospirosis in Texas. A nine-year overview. Tex Med 69:64-68, 1973.

6. Bradley JL: Personal communication. Director, Public Health Region 3, Texas Department of Health Resources, 1976.

7. Texas Animal Morbidity: Texas Department of Health Resources, 1965-1975.

8. Goldberg HS, Blenden DC, Logue JT: Leptospirosis in random and select populations. Arch Environ Health (Chicago) 10:21-23, 1965.

9. Diesch SL, Ellinghausen HC: Leptospirosis. Disease transmitted from animals to man. 436-462. Springfield, Ill, Charles C Thomas, 1975.

10. Leptospirosis. Merck Veterinary Manual. 347-353. Rahway, Merck and Co, Inc, 1973.

11. Thorsteinsson SB, Sharp PM, Musher DM, et al: Leptospirosis: an underdiagnosed cause of acute febrile illness. South Med J 68(2):217-219, 1975.

12. Sulzer CR, Jones WL: Leptospirosis, methods in laboratory diagnosis. Center for Disease Control. DHEW Publication No. (CDC) 74-8275.

13. Feigin RD, Lobes LA Jr, Anderson D, et al: Human leptospirosis from immunized dogs. Ann Intern Med 79:777-785, 1973.

14. Diesch SL, Crawford RP, McCulloch WF, et al: Human leptospirosis acquired from squirrels. N Engl J Med 276:838-842, 1967.

15. Reif JS, Marshak RR: Editorial: Leptospirosis: a contemporary zoonosis. Ann Intern Med 79:893-894, 1973.

Dr. Newman and Mr. Pool, Division of Zoonosis Control, Bureau of Veterinary Public Health, Texas Department of Health Resources, Public Health Region 3, PO Box 10736, El Paso, TX 79997.

The premedical advisory process: attitudes of premedical advisors

Fernando M. Trevino, MPH; Raymond G. Fuentes, Jr; John G. Bruhn, PhD

Yale University's President Kingman Brewster has applied the phrase "grim professionalism" to students seeking admission to law and medical schools.[1] One cause for this fierce attitude is increased competition, partly because of the overwhelming number of applications. In 1975 there were approximately 85,000 applications for 37,000 places in law school in the US, and 50,000 applications for 15,000 places in medical schools.[1] Why are so many students interested in preprofessional tracks? One career counselor sees college students as being weighted down by the concept of success, and in medicine and law one can be relatively rich and famous. In addition, the recently declining job market for college graduates has led many students to pursue law and medicine, which are seen as secure professions. The burgeoning medical and law school applications have aroused concern among students, faculty, and administrators in undergraduate and professional schools.

Medical school admission procedures vary, and grade point averages and medical college admission test scores are weighted differently in different schools. Interviews are widely debated as a further screening device.[2-4] Many medical educators acknowledge that they need a better way to select medical students; the medical college admission test in particular is recognized as having little if any relationship to characteristics of a good physician.[5] Medical schools have largely chosen those students who stand the best chance of successfully completing the basic science courses of the first two years.[6] Wallach has pointed out that measures of academic skills are widely used to determine access to contested educational opportunities. These skills lack utility, especially in their upper ranges, for predicting professional achievement.[7] He notes that obtaining the brightest students possible becomes a way of defining the quality of an institution. If colleges and universities judge one another's national standing in terms of average aptitude and admissions tests, the heavy use of such yardsticks in admissions should be no surprise. Kimball stresses the need for innovative changes in admissions criteria. He also points out that students and faculties must begin to identify some of the goals and objectives in training physicians.[8] Cadbury suggests that if medical schools knew exactly what they wanted, it would be easier to select and prepare future physicians.[6]

Successful applicants are a much-studied group, but little is known about unsuccessful applicants to medical school. Green found that many who were not admitted to medical school frequently had demonstrated an unrealistic pattern of application. They either applied to too few schools or applied to too many schools where they stood little chance of being accepted because of the schools' academic or residency requirements. This would imply (1) that they received inadequate premedical advising; (2) that students do not hear the advice given by advisors; or (3) that students fail to use existing advising services.[9] Becker and his colleagues studied a small sample of unsuccessful applicants to the 1966-1967 entering class of US medical schools and found that 52% of them entered occupations outside the health field. However, unsuccessful applicants indicated that they received little advice to pursue other health careers. This suggests that the guidance system is not

Presented at the Texas Academy of Science meeting, Texas A&M University, College Station, March 5-6, 1976.

fully aiding or advising this ever-growing group of individuals to enter other health or health-related occupations.[10]

According to Barzun there is no "best" preparation for medicine, and judging from the complaints of professionals after graduation there is hardly ever any good preparation. Thus, he states, "It is futile to draw up lovely plans of undergraduate study leading to medical school. The curriculum will be different in every college, apt or inapt for this or that student, for this or that school which admits him."[11] A chairman of the admissions committee at one medical school has stated, "If the students view their undergraduate experience solely as a means of getting into medical school, they then tailor all their activities around what they think a medical school is looking for. As a result, the undergraduate experience becomes narrow, extremely competitive and results in great anxiety."[1] A reduction in these pressures on the premedical student must start with efforts to increase the flexibility of the medical curriculum to facilitate admission of students with diverse backgrounds. Such flexibility must reach the premedical student as a clear message that admission committees are more concerned with the quality of the student's education than with the specific course content.[12]

Being concerned with the discontinuities in preparing for a medical career, we seek to identify (1) similarities and differences in the premedical advisory process in junior colleges and universities, and (2) factors which distinguish universities with high medical school admission ratios from those with low medical school admission ratios. It is hoped that information gained from the viewpoints of premedical advisors will help close the gap that currently exists in the preparation for a career in medicine.

Methods

We compiled a list of all public and private junior colleges and universities in Texas,[13,14] and obtained the names of the premedical advisors. We mailed each advisor a three-page questionnaire, along with a personal letter and a self-addressed, stamped envelope. The aim was to obtain a response from the primary premedical advisors in each school. Questionnaires were mailed to advisors in 54 junior colleges and 54 universities. A second questionnaire, personal letter and self-addressed stamped envelope was mailed to nonrespondents about one month after the first mailing. Responses were received from 46 junior college advisors (85%) and 45 university advisors (83%).

The questionnaire elicited information such as the size of the student body, the percentage of students who are premeds, the number of students who had been accepted into medical school during the previous three years, the number of premedical advisors at the school, how the advisors were chosen and how long they had served, whether or not the school had a premedical committee (and if so, how it functioned), the nature and degree of contact premedical advisors have with premedical students, the minimum grade point average and medical college admission test scores recommended by the advisors, and advisors' views of the medical school admissions criteria and process. The questionnaire, which could be completed in about 15 minutes, was designed to elicit advisors' attitudes toward their role, and their suggestions as to how medical schools could facilitate advisors' functions.

Results

Comparisons Between Junior Colleges and Universities

In learning about the premedical advisory process we first compared the responses from advisors in the 46 junior colleges with those from advisors in the 45 universities to ascertain similarities and differences in the process between these schools.

A. Similarities: Eighty-nine percent of the junior college advisors and 95% of the university advisors had their initial contact with premedical students in their freshman year. Sixty-three percent of the junior college advisors and 72% of the university advisors said that more than 60% of the premeds sought them out for personal or career counseling. Almost all of the advisors in both types of schools said that there was a source for career counseling on their campuses. However, 75% of the junior colleges and 67% of the universities had no club or organization for premeds.

When advisors in junior colleges and universities were asked whether or not criteria for admission to medical school should be changed, they expressed similar opinions. The following quotes illustrate their attitudes regarding admission criteria:

"I agree GPA and MCAT are too heavily weighted. Surely three or four years of personal contact with a student should be as valid as a 45-minute interview! Both GPA and MCAT are traditional methods of evaluation. Newer methods, portfolio of achievement, special accomplishment, humanity and concern, must now be taken into consideration."

"The MCAT is completely irrelevant in a good many areas. It does not increase the competency of a physician if he knows that Brahms is the third of the three B's in music after Bach and Beethoven."

"Many of our 3.8 students do not have the common sense and altruism of the 3.4 students. I believe the B-plus student from university fares better in medical school. More attention should be given to students who have held down two jobs to stay in school and nevertheless have B-plus grades. They are the ones who will survive the rigors of medical school."

"We must maintain some standards, and GPA is about the best criteria. However, many of my students come to me very deficient in their academic background and thus their first-year college GPA is very low. But these students can and will do fine later. Therefore, some consideration should be given to later academic success and student's commitments."

Advisors in the two types of schools also showed agreement in their attitudes regarding the medical school application process. Some of their ideas are expressed in the following quotes:

"We are in a unique situation in identifying, nurturing and guiding our students. We know what we have and can better help the medical schools in making final decisions. I feel that we can have a very meaningful input into your efforts to make final selections."

"Try to announce acceptances earlier and let me know about students on whom I have sent in recommendations."

"Publish primary screening formula along with best estimate of what will constitute a competitive score. If GPA and MCAT are to be used as a first hurdle and applications not passing will get no further review—tell the students."

"Set GPA at 3.0 and look at individual. People with high GPA's often have more problems than those around 3.0. The 3.5 now encourages the wrong type goals—grades at any price. Does not allow us to teach for knowledge—rather for grades. Students go to school to get grades."

The advisors were asked, "Since there are more qualified premeds than can be admitted to existing medical schools, what ideas do you have about career counseling for students early in their college years?" This elicited a great deal of comment and consensus among advisors in both junior colleges and universities. They said:

"First year counseling seems a waste—sophomore advisement and counseling after evaluation appears useful. A reflec-

tion of potential realized is usually evident during the junior year."

"Advise your own constituents as to what is really required and strongly urge them to tell it like it is."

"I always, no matter how bright, counsel a student to have alternatives—this is life."

"We attempt to begin counseling with entering freshmen, but most students are optimistically sure they are not affected by statistics."

"It is difficult to convince a freshman or sophomore premedical student that he should choose a viable alternative to med school. The main point is to make certain that counseling is available and that students know where to go to obtain help."

"Med schools should require only a few 'core' courses, which could be electives in many other degree programs. This would give a student another option as a career choice if he or she is not accepted."

B. Differences: There were also differences in the advisory process at junior colleges and universities. All of the advisors in universities and 89% of the advisors in junior colleges were in the physical and biological sciences, but 11% of the junior college premedical advisors were in the social sciences and humanities. In the universities, 74% of the advisors were appointed, while the majority of junior college advisors (58%) were advisors by virtue of position. Advisors at universities had functioned in this capacity longer than advisors in junior colleges. Indeed, 44% of the premedical advisors in universities had served in this capacity for ten or more years, compared to 12% of junior college advisors who had served that long. As would be expected, universities had more premedical advisors than junior colleges. Therefore, it is not surprising that 79% of the universities had premedical committees, whose primary functions were to provide student evaluations and recommendations to medical schools, whereas only 17% of the junior colleges had such committees. In universities, 90% of the advisors had their initial contact with premedical students at registration and advisement, compared to 67% in junior colleges. A greater percent of premedical advisors in junior colleges had premeds in their classes; 55% of the university advisors and 70% of the junior college advisors said that they personally knew more than one-half of the premedical students on their campuses. Advisors in both types of schools were quite realistic with respect to grade point average and medical college admission test levels to gain admission to

1. Weighted acceptance ratios in Texas public and private universities from 1973 to 1975 by size of enrollment.

Student Enrollment	Public Universities (N=22) Acceptance Ratio	Total No. Applications	Private Universities (N=21) Acceptance Ratio	Total No. Applications
Under 3,000	.37	140	.62	666
3,000 to 9,999	.47	43	.60	1,176
10,000 and over	.46	2,632	.80	170
Overall Acceptance Ratio	.46		.62	

Total number (N) was 43, as two schools lacked sufficient data to be included in this table.

medical school. Fifty-seven percent of the university advisors and 42% of the junior college advisors would discourage students with grade point averages of 3.2 or less from applying to medical school. Sixty-six percent of the university advisors and 69% of the junior college advisors would discourage students from applying to medical school if their average medical college admission test scores were 550 or less.

Factors Related to Acceptance into Medical School

In examining the data on the premedical advisory process in junior colleges and universities, we noted the influence of the enrollment of the school on the advisory process; in particular, the size of the school seemed to be directly related to the degree to which students and advisors knew each other personally. We wanted to examine the association between aspects of the student-advisor relationship, school enrollment, and the degree of success universities had had in getting their students admitted to medical schools. Since universities are more closely tied to the admission process than junior colleges, we focused only on the 45 universities responding to our questionnaire in this portion of the data analysis. We grouped the universities according to whether they were publicly or privately supported and then separated them according to size of enrollment.

The majority of premedical advisors in both public and private universities are appointed. Premedical advisors in private schools know more of their premedical students personally than do advisors in public schools (70% and 54% respectively). In addition, more advisors in private than public universities discourage students who have grade point averages of less than 3.5 and average medical college admission test scores of less than 550 from applying to medical schools. Therefore, it appears that advisors in private universities know more of their advisees personally and hold out higher admission criteria for them than do advisors in public universities.

We asked advisors how many students from their respective schools applied, and how many were accepted, into a medical school during the three-year period 1973 to 1975. We then calculated a weighted ratio of the number of acceptances to the number of applications. Fig 1 shows that the acceptance ratio for private universities as a group was higher (.62) than the acceptance ratio for public universities (.46). When school enrollment is considered, small and medium-sized private universities have the highest acceptance ratios. The high acceptance ratio of .80 for large private universities is based on one school and, therefore, may be an artifact.

Fig 2 shows that acceptance ratios are related to the number of years the primary premedical advisor has served in this cap-

2. Weighted acceptance ratios in Texas public and private universities from 1973 to 1975 by size of enrollment and number of years premedical advisors have served.

Student Enrollment	Public Universities (N=22) — Acceptance Ratio by Years Served as Advisor			Private Universities (N=21) — Acceptance Ratio by Years Served as Advisor		
	< 5 years	5-9 years	10+ years	< 5 years	5-9 years	10+ years
Under 3,000	.20	.41	.50	.69	.75	.49
3,000 to 9,999	.25	.75	.55	.61	.60	–
10,000 and over	.44	.38	.51	–	–	.80
Overall Acceptance Ratio	.42	.42	.52	.68	.60	.62

Total number (N) was 43, as two schools lacked sufficient data to be included in this table.

acity. Acceptance ratios are highest among public universities, regardless of size of enrollment, when the premedical advisor has served as advisor for ten or more years. The acceptance ratio is lowest among small and medium-sized public universities where advisors have served less than five years. Acceptance ratios are highest among small private universities where advisors have served less than ten years, and acceptance ratios are lowest in small private universities where advisors have served more than ten years.

We also examined the relationship between the presence or absence of a premedical committee on campus and the acceptance ratio of the school. Fig 3 shows that there are higher acceptance ratios among medium-sized and large public universities with a premed committee. The acceptance ratio at large public universities does not vary according to whether or not there is a premed committee. The medium-sized and large private universities in our study had premed committees and had higher acceptance ratios than their public counterparts.

We calculated the average ratio of the total number of medical school applicants to the total number of premedical advisors in public and private universities with respect to size of enrollment. Fig 4 shows that public universities had a higher average number of applicants per advisor than private universities (54.0 and 30.4 respectively). Large public and medium-sized private universities had the highest average number of applicants per advisor. Small and medium-sized public universities and small and large private universities had the lowest average number of applicants per advisor. This would seem to be related to the greater degree of personal contact advisors have with students in universities with less than 10,000 students and the selectivity with which advisors in small universities encourage students to apply.

Discussion

Almost all premedical advisors are appointed or serve as advisors as a result of the administrative position in the school. Thus, premedical advising is an additional, not a primary, responsibility. With the growing number of students who are science majors with interests in medicine or other health fields, and the diverse and changing requirements for admission to professional schools, premedical advising could easily be a full-time position for several faculty members. At present there is little or no personal or professional reward for serving as a premedical advisor. Junior college advisors are removed from both universities and medical schools with respect to knowing the career outcomes of their former students. Junior college advisors are also often the last to be informed of changing requirements of health professional schools, or to be told what kind of applicants these schools are seeking.

Medical schools require the recommen-

3. Weighted acceptance ratios in Texas public and private universities from 1973 to 1975 by size of enrollment and presence or absence of premed committee.

Student Enrollment	Public Universities (N=22)		Private Universities (N=21)	
	Acceptance Ratio — Premedical Committee		Acceptance Ratio — Premedical Committee	
	Yes	No	Yes	No
Under 3,000	.40	.20	.54	.82
3,000 to 9,999	.56	.25	.60	–
10,000 and over	.47	.44	.80	–

Total number (N) was 43, as two schools lacked sufficient data to be included in this table.

dation of a premedical advisor or the evaluation of a premedical committee as a part of the admission application. Premedical advisors often state that medical schools do not rely on their recommendations enough and medical school admissions committees complain that advisors' recommendations, especially from large schools, are not of sufficient depth or detail to be a critical factor in the decision to admit. The open record law is sure to minimize the importance of letters of recommendation by all parties.

The lack of personal data about applicants many times works to their disadvantage, especially when they are academically qualified, but not competitive enough to be interviewed by an admissions committee. Thus, the applicant may become a casualty because he or she is not known as a person. The results of the present survey indicate that a close advisor-student relationship in a small or medium-sized private university provides the best academic setting for acceptance into a medical school in Texas.

Acknowledgment

Mr. Harvey Bunce and Mr. Russell Zears of the Biometry Laboratory of the Department of Preventive Medicine and Community Health of The University of Texas Medical Branch at Galveston advised us in the data processing and analysis.

References

1. Yale Alumni Magazine 39:46 (January), 1976.
2. Editorial. Medical school admission: it's not what it used to be. Tex Med 71:108-112, 1975.
3. Seabrooks NH: The med school crush: a syndrome of social ills. Gen Motors Quart 2-12 (Fall) 1974.
4. Goldhaber SZ: Medical school admissions: a raw deal for applicants. Science 178: 332-334, 1972.
5. Jarcho S: Education of the premedical student in the humanities and the biological and physical sciences. Bull NY Acad Med 49:277-279, 1973.
6. Cadbury WE: Education of the premedical student in the humanities and the biological and physical sciences. Bull NY Acad Med 49:258-264, 1973.
7. Wallach MA: Tests tell us little about talent. Am Sci 64:57-63, 1976.
8. Kimball CP: On admission policies and medical education. J Med Educ 47:365-367, 1972.
9. Green GA: A preliminary study of unaccepted applicants. J Med Educ 45:449-452, 1970.
10. Becker MH, Katatsky ME, Seidel HM: A follow-up study of unsuccessful applicants to medical schools. J Med Educ 48:991-1001, 1973.
11. Barzun J: The education of candidates for medical school. Bull NY Acad Med 49:253-257, 1973.
12. Elliott PR: The evolutionary curriculum: revolutionary accountability vise. J Med Educ 48:824-831, 1973.
13. Furniss WT (Ed): American Universities and Colleges, ed 11. American Council on Education, Washington, DC, 1973.
14. Education Directory, Higher Education 1972-1973, US Government Printing Office, Washington, DC, (December) 1972.

The authors, Office of the Dean of Medicine, The University of Texas Medical Branch, Galveston, TX 77550.

4. Average number of applicants per advisor in Texas public and private universities from 1973 to 1975 by size of enrollment.

Student Enrollment	Public Universities (N=21) Average No. Applicants Per Advisor	Private Universities (N=21) Average No. Applicants Per Advisor
Under 3,000	17	15
3,000 to 9,999	17	78
10,000 and over	60	19
Average Number of Applicants Per Advisor	54	30

Total number (N) was 42, as three schools lacked sufficient data to be included in this table.

Selecting a community for medical practice:

A study of factors, characteristics, and preferences among practicing physicians, family practice residents and medical students

Marion R. Zetzman, DrPH; Constantine Stefanu, PhD

Introduction and Overview

The distribution of physician manpower in the United States has emerged as a major issue in public policy and medical education. While the disparity in physician supply continues to increase between metropolitan and rural areas, it is evident that the unequal distribution of physicians is not improving. A 1974 study by the Rand Corporation indicated that only about 6% of all US medical school graduates in the combined classes of 1963, 1964, and 1965 have located their practices in nonurban counties of less than 50,000 population. Those counties represent 19% of the nation's total population.[1] Distribution problems and needs of rural health care in Texas have been reviewed previously.[2]

In Texas, about 75% of the population lives in 37 counties having more than 50,000 residents. The remaining 25% reside in 217 counties of less than 50,000 each; 23 of these counties, with a combined population of 52,900, were without the services of a doctor of medicine in 1973. Fourteen percent of all medical specialists, about 35% of all general or family practitioners, and 22% of all physicians in primary care specialties (general/family practice, internal medicine, pediatrics, obstetrics-gynecology) were reported to practice in the 217 counties of less than 50,000 population. These physicians are unequally distributed over an area of 595,588 sq km (230,848 square miles). Texas has a total surface area of 689,735 sq km (267,339 square miles).

As of Dec 31, 1973, about 26% of Texas' total of 10,467 nonfederal physicians in direct patient care were general or family practitioners. Two counties of more than 1 million persons each (Dallas and Harris) had 27% of the state's population, 22% of the general-family practitioners, and more than 40% of the other three primary care specialists in direct patient care.

In developing feasible programs to encourage new physicians to practice in nonurban areas and thus improve the parity of physician distribution between urban-rural environments, we need to understand the factors and determinants that influence a physician's choice of practice location. This article reports on a statistical study evaluating the differences and variabilities in backgrounds, personal influences, professional considerations, community characteristics, and other factors affecting choice of a community for medical practice. This study group consisted of practicing physicians in nine rural counties of North-East Central Texas,* junior and senior medical students at The University of Texas Southwestern Medical School in Dallas, and family practice residents at the John Peter Smith Hospital in Fort Worth.

Study Methods and Group Characteristics

In February 1975 a questionnaire was designed to obtain data on selected variables that might influence a physician in choosing a community in which to establish a medical practice. The questionnaire consisted of 20 multiple response questions about demographic, personal, and family background characteristics, community features, medical practice preferences and opinions concerning selected factors of significance, deterrents, and related measures that may affect the physician's decision-making process.

*The counties are Anderson, Ellis, Freestone, Henderson, Hill, Kaufman, Leon, Limestone, and Navarro.

The physicians selected for this study practiced in a multicounty area that was part of a rural health research and development project cooperatively undertaken at that time by the Medical Arts Clinic Association of Corsicana and the Department of Family Practice and Community Medicine at The University of Texas Southwestern Medical School in Dallas.[4] The questionnaire was mailed to the 134 physicians practicing in the study area. Although the questionnaire was long and the deadline for its return was short, 56% (78) of the physicians returned the forms.

Half of the respondents practiced in towns of less than 15,000 population. None practiced in towns of less than 1,000 or more than 25,000. They had an average of 18.3 years in practice. Only 3% considered themselves to be retired or practicing part-time. More than 40% of the respondents graduated from medical school before 1949.

More than half (41) were in general or family practice. Eleven were surgeons, seven were internists, and two were pediatricians and obstetricians, respectively. Eleven named other specialties. Slightly more than one-third were in solo practice, one-third were joined in a professional association, and the remainder were in partnership or group practice.

Nearly three-fourths (56) of the responding physicians originally came from nonurban communities. Of almost equal importance, nearly 60% (46) of the physicians' spouses also had predominantly nonurban backgrounds.

In light of the many programs that have been instituted within medical schools to encourage small community practice, it is significant to find that only two of the 78 physicians had selected their present sites by the time they had graduated from medical school, and only one of these had entered with the decision already made. The greatest number (36) made their selection during their internship or residency, but 26 practiced elsewhere for five or more years before moving to their current locations.

The questionnaire was distributed to 274 junior and senior medical students at The University of Texas Southwestern Medical School in Dallas who were asked to complete it and drop it, unsigned, in a conveniently located box. No incentive was added; no coercion was used. A creditable 60% (164) responded. The respondents were between 22 and 37 years of age (μ=25). One in 12 was female; more than half (55.5%) were married, and 30% of those had children. The students were representative of their respective classes: juniors, 53.7% and seniors, 46.3%.

Nearly two out of three (63.4% came from communities of over 50,000 population, while only one in nine (11.0%) came from communities of 5,000 or less. Of those who were married, 70% had spouses who came from communities of over 50,000. Response indicated that 11% planned to apply for three-year family practice residencies. By comparison, 36.6% of the students planned residencies in internal medicine, 9.2% in pediatrics, and 9.8% in obstetrics-gynecology. The remainder were undecided.

More than three-fifths of the students (61.6%) had no tentative site in mind as a location for their future practices. As a matter of preference, however, one-fourth (25.7%) mentioned other states. Just over half (50.6%) specified tentative locations in Texas and, of these, 36% preferred North Texas, 27% Central Texas, 12% West Texas, 9% South Texas and East Texas, and 3% or less the Panhandle and the Gulf Coast. The balance (23.7% indi-

cated no preference at all. Only 12.8% had definite plans to return to their home towns to practice.

Of the respondents, 92.7% had definite opinions as to the size of community in which they hoped to practice and, of these, 65.8% preferred to locate in cities of at least 50,000, with a majority (34.2% of the total) specifying cities of over 100,000. Only two (1.4%) said they would prefer a location of fewer than 5,000. Less than one in seven (13.9%) said they would prefer a community of under 15,000.

Nearly four out of five (79%) mentioned small group practice as most desirable, with large group practice (9.6%) next in popularity. *Not one student stated a preference for solo practice.* Nearly two-thirds (64%) said they wished to live not more than 96 km (60 miles), about an hour's drive, from a large metropolitan area.

The questionnaire was given also to 41 family practice residents at John Peter Smith Hospital in Fort Worth. Thirty-six (87%) completed and returned it. The respondents were between 25 and 40 years of age, with a mean age of 27. All were male and only four (11.1%) were unmarried. Three-fifths of those married had children. Twenty were first-year residents, eight second-year, and four third-year. Four did not indicate their level of training. Exactly half (18) came from communities of over 50,000 population. More than a quarter (27.8%) came from communities of 5,000 or less. Collectively, their wives had the same origins.

Three-fourths of the residents intended to complete the full three-year residency. One was considering a residency in obstetrics-gynecology. Six planned to complete no more than two years in the residency program. Only a third had selected a tentative site for their practices; however, 23 (63%) stated a preference. Of these, five mentioned states other than Texas, five mentioned North Texas, five Central Texas, four South Texas, three East Texas, and

1. Ranking of mean values of significant factors in selecting a community for medical practice.

Factor	Practicing Physicians (N = 78)		Family Practice Residents (N = 36)		Medical Students (N = 164)	
	Mean Value	Rank	Mean Value	Rank	Mean Value	Rank
The idea of small community living	1.16	1	2.11	6	2.28	9
Availability of adequate hospital facilities	1.27	2	1.22	1	1.28	1
Influence of spouse and family	1.41	3	1.46	2	1.63	3
Economic potential of practice location	1.64	4	2.14	8	2.18	6
Prospect of building a busy early practice	1.86	5	2.17	9	2.16	5
Availability of cultural opportunities	1.91	6	2.11	6	1.71	4
Need for more physicians in small communities	1.91	7	2.06	4	2.25	8
Opportunity for group practice	2.04	8	1.50	3	1.51	2
Opportunity to practice with an established physician or group	2.10	9	2.11	6	2.20	7
Challenges of practicing in a nonurban area	2.13	10	2.36	10	2.63	14
Proximity to medical school	2.20	11	2.42	11	2.30	10
Prospect of being influential in community affairs	2.37	12	2.44	12	2.60	13
Influence of friends	2.71	13	2.67	14.5	2.56	12
Influence of parent or relative	2.72	14	2.67	14.5	2.69	15
Influence of colleagues and professors during training	2.77	15	2.58	13	2.36	11
	$p < .01$					

one West Texas. Only one intended to return to his home town.

Most of the respondents (92%) had definite preferences as to the size of the community in which they wished to practice. More than half (54.5%) wished to locate in communities of 15,000 or less; six (18%) preferred communities of over 50,000. Only two said they would locate in a community less than 5,000.

An overwhelming 92% said they preferred group practice, with 30 out of 33 preferring small groups. Only two intended to enter solo practice; one preferred a partnership. Three-fourths of the residents wished to live no more than 96 km (60 miles) from a large metropolitan center.

The three groups, consisting of 78 practicing physicians, 36 family practice residents, and 164 medical students, were then asked to rank factors selected as criteria in choosing a community for medical practice. These were addressed to both positive and negative influences in the physician's decision-making process. The study participants were asked to assign a value to each item with the value of one being most important and each succeeding number becoming less important. Within each group the mean value for each variable was calculated and the factors were then ranked in ascending order from the most to the least desirable (or vice versa where appropriate), according to its computed rank value. In the figures, the items selected for analysis are presented by rank order comparison of the physician's group to the other groups. In each figure, the specific factors, the computed mean value, and its corresponding rank are listed vertically under the appropriate group heading. Statistical tests were then applied to the data in order to determine the degree of relationship between each set of ranked factors. The coefficient of concordance (Kendall's W) was computed to identify the

2. Ranking of mean values of factors regarded as deterrents in selecting a community for medical practice.

Factor	Practicing Physicians (N = 78)		Family Practice Residents (N = 36)		Medical Students (N = 164)	
	Mean Value	Rank	Mean Value	Rank	Mean Value	Rank
Lack of hospital in community	1.08	1	1.16	1	1.27	1
Insufficient number of physicians for adequate relief	1.32	2	1.44	2	1.46	2
Dissatisfaction of spouse with community	1.39	3	1.63	5	1.70	5
Lack of adequate clinical and technological support	1.55	4	1.44	3	1.53	3
Dissatisfaction with public schools	1.57	5	1.86	8	1.82	8
Prospects of too large a work load	1.65	6	1.60	4	1.70	6
Lack of cultural/entertainment opportunities	1.87	7	2.06	10	1.74	7
Absence of group practice opportunity	1.91	8	1.69	6	1.65	4
Lack of continuing medical education programs	2.10	9	1.69	7	1.83	9
Inability to use time of allied health professional (RN, pharmacist, laboratory, X-ray technician, etc) productively with patients	2.18	10	1.92	9	1.91	10
A general or family practitioner moving into an area heavily dominated by other specialists	2.41	11	2.28	12	2.51	11
Professional status of rural-based physicians among medical peers	2.44	12	2.56	11	2.64	12
Other specialists moving into a heavily dominated general or family practice community	2.55	13	2.58	13	2.68	13
	$p < .01$					

extent of association existing between the selected factors among the three study groups.[5] Various data are presented here as significant factors, based on statistical analyses examining the interrelationship between the three sets of ranked values.

Results

In Fig 1 we considered 15 factors for significance in selecting a community and presented them in ascending order as ranked by the group of practicing physicians. The more significant items included in this figure are the availability of adequate hospital facilities as well as the influence of the spouse and family when a choice is made. Factors such as the community's proximity to a medical school or the influence of friends, parents, professors, or colleagues appear to have little significance in the selection process according to the respondents in the three groups. A high degree of relationship exists among the three sets of ranked factors in Fig 1 as evidenced by the computed coefficient of concordance of 0.83, which is highly significant ($p < .01$).

Variables regarded as deterrents in selecting a community are presented in Fig 2. The lack of a hospital, an insufficient number of physicians for adequate relief, and spouse dissatisfaction are major deterrents identified by the three groups. The lack of adequate clinical and technological support is also viewed as an important deterrent. The situation of family practitioners moving into an area dominated by other specialists is not considered to be a deterrent. Furthermore, none of the groups considered professional status of rural-based physicians, as viewed by the medical profession as a whole, to be a significant factor. Again, the association of factors ranked as deterrents by the various groups is statistically significant considering the coefficient of concordance of 0.94 ($p < .01$). The lack of a community hospital, insufficient number of practicing physicians for adequate relief, spouse dissatisfaction with the community, and the absence of adequate clinical and technological support are cited as prime negative factors in the selection process.

The effectiveness ranking of selected recruiting techniques is shown in Fig 3.

3. Ranking of mean values of effectiveness of selected recruiting techniques.

Technique	Practicing Physicians (N = 78) Mean Value	Rank	Family Practice Residents (N = 36) Mean Value	Rank	Medical Students (N = 164) Mean Value	Rank
Recruitment visits with potential candidates	1.50	1	1.56	1	1.87	1
Word-of-mouth advertising	2.83	2	2.70	2	2.96	2
Professional journal ads	3.29	3	3.46	3	3.29	3
Newspaper ads	5.26	4	4.90	5	5.09	6
National Health Service Corps assignments	5.43	5	3.78	4	3.54	4
Other federal or state programs	5.74	6	4.93	6	4.14	5
	$p < .01$					

Personal visitation with potential candidates is considered to be the most positive method of recruiting. The coefficient of concordance of 0.94 in Fig 3 is statistically significant ($p<.01$) and suggests almost perfect agreement between practicing physicians, residents, and students concerning the most efficacious manner of physician recruiting.

Finally, the most significant incentive to attract primary care physicians to nonurban communities (Fig 4) appears to be in the provision of support services and the availability of professional consultation. Continuing educational opportunities with a medical school also is of prime importance as a means of attracting primary care physicians to a community. The degree of association for the incentives between the three groups is statistically significant, the coefficient of concordance being equal to 0.92 ($p<.01$).

Discussion and Conclusions

If maldistribution in rural medical practice is to be remedied, the young physician must play a major role in altering the trend.[6] To be realistic, relatively little can be done to alter personal life-style preferences or the environmental and sociocultural characteristics of rural areas to satisfy the personal preferences of many physicians.[7] But several studies have shown that rural physicians tend to have rural origins, urban physicians tend to have urban origins, and the medical student's, resident's, and practicing physician's spouses tend also to have the same cultural backgrounds.[8-10] These findings are further substantiated by our study. The appeal of living in a small community is the factor of most significance to practitioners who took part in this study, the majority of whom were family physicians who came from small communities (Fig 1).

Contrary to the traditional image of the American physician, a most interesting fact to emerge from this analysis is that medical students and residents do *not* prefer to enter solo practice, small group practice being the most desirable. If these opinions hold elsewhere and are generally representative, then solo practice of medicine may eventually become an anachronism. The groups participating in this study tend to value highly the presence of other physicians and the availability of equipment, facilities, and allied personnel required for the delivery of what they consid-

4. Ranking of mean values of selected incentives to attract primary care physicians to a nonurban community.

Incentive	Practicing Physicians (N = 78) Mean Value	Rank	Family Practice Residents (N = 36) Mean Value	Rank	Medical Students (N = 164) Mean Value	Rank
Provision for support services (laboratory, insurance, accounting) and professional consultation	1.39	1	1.45	1	1.51	1
Provision for continuing education opportunities with a medical school	1.96	2	2.50	2	2.54	2
A graduated minimum salary guarantee	1.99	3	2.87	3	2.97	4
Tax or other financial incentives for building and equipment	2.19	4	3.64	4	2.93	3
	$p<.01$					

er to be quality medical care. In this connection, some health services researchers suggest a trend toward centralization of physicians and facilities in rural areas, linked to satellite clinics in outlying communities, as a means of attracting and retaining physicians.

Cullison and associates[11] at the University of Missouri School of Medicine in Columbia have noted that of the many determinants involved in the choice of a practice location, few can be influenced or altered by the medical school. They suggest that increasing emphasis be placed on selecting applicants with rural backgrounds who are interested in small community practice, and expanding programs in family medicine, since their data show that family practitioners are three times as likely to select nonmetropolitan practices as are physicians entering the other primary care specialties. On the other hand, Steinwald and Steinwald,[12] of the American Medical Association, have pointed out that selecting medical students on the basis of their life-style preferences can have extremely unpredictable results.

The variables considered here indicate that adequate hospital facilities and available clinical and technological support are prime factors in the selection of a community for medical practice. The availability of professional consultation, relief support, and continuing educational opportunities with a medical school are also considered to be positive features in attracting physicians. Finally, there appears to be significant agreement concerning the effectiveness of measures to recruit physician manpower and the selected incentives that might be appropriate.

In matching the personal life-style preferences of physicians with the presence or absence of local health resources, it is obvious that the rural community and "medical trade area" have a critical responsibility in health systems planning and development. Problems of expanding medical care in rural communities cannot be resolved by health agencies or the medical and allied health professions alone. The solution involves an intricate interplay between individual likes and dislikes, public priorities, economic and industrial development, favorable employment opportunities, maintenance of adequate educational programs, cultural activities, and a multitude of other social forces that make communities attractive and inviting to medical professionals.

Acknowledgments

This study was supported in part through Contract 75-109-I from the Regional Medical Program of Texas. Louis E. Gibson, MD, president, Medical Arts Clinic Association of Corsicana, assisted during the study.

References

1. Heald K, Cooper JK, Coleman S: Choice of location of practice of medical school graduates: analysis of two surveys. Rand Corporation, Santa Monica, (Nov) 1974, pp 1-7.

2. Gibson LE, Zetzman MR: Rural health care: problems and prospects. Tex Med 72(3):74-79, 1976.

3. Gray PD: Distribution of physicians in Texas, 1973. Texas Medical Association, Office of Medical and Health Manpower, 1973, passim.

4. Zetzman MR, Gibson LE: Rural health: a study and plan for expanding primary care services in North-East Central Texas, report to the regional medical program of Texas. (Aug) 1975, p 359.

5. Kendall MG, Stuart A: The advanced theory of statistics, ed 2. Hafner Publishing Co, New York, 1968, vol 2, pp 477-509.

6. Loveland GC: Rural practice: what health professionals look for. J Kans Med Soc 74:234-235, 1973.

7. Steinwald B, Steinwald C: The effect of preceptorship and rural training programs on physicians' practice location decisions. Med Care 13(3):219-229, 1975.

8. Bible BL: Physicians' views of medical practice in nonmetropolitan communities. Public Health Rep 85: 11-17, 1970.

9. Parker RC Jr, Tuxill TG: The attitudes of physicians toward small community practice. J Med Educ 42:327-344, 1967.

10. Taylor M, Dickman W, Kane R: Medical students' attitudes toward rural practice. J Med Educ 48:885-895, 1973.

11. Cullison S, Reid C, Colwill J: Medical school admissions, specialty selection, and distribution of physicians. JAMA 235(5):502-505, 1976.

12. Steinwald B, Steinwald C: The effect of preceptorship and rural training programs on physicians' practice location decisions. op cit, p 227.

Dr Zetzman, Associate Professor and Acting Chairman, Department of Family Practice and Community Medicine, The University of Texas Southwestern Medical School, Dallas, TX 75235.

Dr Stefanu, Director of Planning and Associate Professor, The University of Texas Health Science Center at Dallas, Dallas, TX 75235.

Mario Ramirez, MD, wins the AMA Benjamin Rush Award

"Compassion, patriotism, and dedication to the fulfillment of health care and civic programs—these are the qualities which best describe Dr Mario Ramirez."

Those were the words American Medical Association president, Richard E. Palmer, MD, used to present Mario E. Ramirez, MD, a Texas family physician, the Dr Benjamin Rush Bicentennial Award. Dr Ramirez accepted the award at the AMA meeting in Philadelphia Dec 5. The prestigious award is presented for citizenship and public service to Dr Ramirez, who has been practicing in one of the poorest counties of southern Texas for the past 27 years.

In accepting the award, Dr Ramirez said that his family has lived in the Rio Grande Valley for the past 200 years.

"I am proud of my Mexican heritage, and I am proud to be an American. To receive an award as a physician for citizenship in 1976 in Philadelphia is a greater honor than I had ever dreamed of.

"The fact that I stayed in my community and tried to improve the health standards and tried to improve the overall quality of life in the community are my contributions to medicine," the physician said.

"But, in my case, there was no great sacrifice involved in deciding to return home to practice. It would have been a sacrifice to have done otherwise," the physician said.

Dr Ramirez accepted the award plaque named after Dr Rush, one of the four physician signers of the Declaration of Independence, who was considered to be the most influential physician in Colonial America.

With him to accept the award were his wife, father, brother and sister-in-law, and five children.

As the award indicates, to his community Dr Ramirez has given.

When beginning his practice in Roma, Dr Ramirez rented a house, which he converted to a four-bed hospital, principally for obstetrics.

Later, he rented a larger house and con-

Richard E. Palmer, MD, left, American Medical Association president, presents Mario E. Ramirez, MD, with the Dr Benjamin Rush Award plaque in Philadelphia.

verted it to an eight-bed hospital, with laboratory and x-ray facilities as well as an operating room, used by a general surgeon from Rio Grande City once a week.

Dr Ramirez also instituted career conferences in the local public school to interest youngsters in health service careers.

For many years Dr Ramirez was the only physician in the area.

He played an active role in giving economic assistance to needy families through state and federal programs.

He has also served as Judge of Starr County.

Under his leadership, the quality of life in Starr County has improved dramatically. A new, 50-bed hospital was built and dedicated in 1975. The county's incidence rates of diphtheria, tetanus, whooping cough, typhoid, and poliomyelitis dropped markedly following his service as County Health Officer.

Successful programs in low-rent housing, adult and secondary education, transportation, and recreation have been instituted.

This award isn't the first for Dr Ramirez. The Texas Academy of Family Physicians cited him for "service to humanity beyond the call of duty" during the aftermath of Hurricane Beulah in 1967. The Texas Medical Association conferred its Distinguished Service Award on Dr Ramirez in 1972 in recognition of his dedication to his patients, and to his county's public health needs. The University of Texas presented its Distinguished Alumnus Award to Dr Ramirez in 1975.

The work of Dr Ramirez is continuing. He has accepted another leadership challenge. He is serving as the chairman of a special South Texas Medical Steering Commission which has the goal of improving the delivery of health care services in a 40 county area of more than two million persons. The committee will seek ways to expand services utilizing private and government grants, study the possible creation of medical foundations and/or health maintenance organizations as vehicles to extend services, and develop new programs to attract medical personnel into the area.

Dr Ramirez's predictions for the future of medicine are optimistic. "I see a renewed interest in family practice by young physicians with more and better training of future practitioners, and more stature and recognition of family practice as a specialization," he concluded.

Mario Ramirez, MD, left, his wife, and father attend the AMA Sunday session, where Dr Ramirez was presented the Dr Benjamin Rush Award.

The Chalberg Photo Collection
Austin-Travis County Collection
Austin Public Library, Austin, Texas

Texas physicians in the Texas Legislature, "wrangling as well as lawyers"

In 1887, an Austin newspaper reporter observed that "doctors know how to wrangle as well as lawyers." Since 1901, more than 30 physicians have "wrangled" as members of the Texas Legislature.

The early 20th century saw the Texas Legislature produce many laws related to public health. A malpractice act provided for the revocation of licenses of physicians ". . . who shall be guilty of any fraudulent or dishonorable conduct, or of any malpractice, or shall by untrue or fraudulent statement or representation made as such physician . . . procure and withhold . . . any money, negotiable note, or thing of value . . ." The act was passed in 1905 by the 29th Legislature, which included three physicians.

The members of Texas Medical Association were optimistic about the 30th Session, even though records show only one physician member. The September 1906 issue of *Texas State Journal of Medicine* noted, "On the whole, the nominating campaign appears to have resulted in a victory for public health. The candidates stand for a more enlightened public sentiment. They will unquestionably be more inclined than in former years to give medical legislation a respectful and friendly consideration."

The journal's prediction proved accurate as the Medical Practice Act and the Anatomical Bill were passed by both houses of the Legislature. The Medical Practice Act provided for "one board, selected without regard to school, to examine on the fundamental branches of medicine only, without regard to the method of practice of the applicants."

The Anatomical bill provided for ". . . the distribution of the pauper dead, such as

must otherwise be buried at the public expense, to the various medical colleges of the State, and to others who would study anatomy by dissection, under thoroughly adequate safeguards."

The Board of Health Bill, defeated in the 30th Session, was reintroduced during the 31st Legislature. Doctors following the 31st session also paid close attention to House Bill No. 53, to establish a state sanatorium for tuberculosis.

With the Medical Practice Act and the Board of Health Law enacted, Texas Medical Association turned its attention to a campaign against quackery. TMA's Committee on Enforcement of Public Health Laws adopted a plan whereby prosecutions extended from county to county. "The evident intention of this plan," reported the December 1910 *Texas State Journal of Medicine,* "is to keep the violators of the medical practice laws on the run, denying them any haven of rest within the borders of this State."

The 32nd Session included five physician members. This Session considered 14 public health measures. Members again mulled over the tuberculosis sanitorium bill, as well as an Anti-Booster bill designed to end solicitation of patients by quacks and "humbug institutions." A marriage restriction bill, to prevent the marriage of "diseased or degenerate persons liable to procreate" also was on the docket. H.B. 390, "preventing the addition of caffeine, and other deleterious substances in fountain drinks (said to be aimed at a well-known and much advertised fountain drink, specifically)," was defeated after due consideration by the 32nd Legislature.

The May 1911 *Texas State Journal of Medicine* reported that the Tuberculosis Sanitorium had "at last" been provided for by the state. "It has not come into existence exactly as we would have it, but the law is in much better shape than we for some time anticipated that it would be." The article described the organization of the Sanitorium: "There are to be two colonies, of sixty beds each, to be located and managed by a State Anti-Tuberculosis Commission consisting of the Governor, State Health Officer and three citizens. The entire time of the appointed members of the Commission must be given to the management of the colonies and to educational work among the people. They will be paid a salary of $1800, and expenses. . ."

According to Pat Ireland Nixon, MD, in *A History of the Texas Medical Association, 1853-1953,* the chief result of TMA's Legislative Committee during 1913, the 33rd session, was the enactment of a bill authorizing the establishment of county hospitals. This bill provided for voting of bonds by a single county, a group of counties, or a county and a city for the purpose of hospital construction. Five physicians were among those legislators considering the bill.

I.E. Clark, MD, a Schulenburg physician, served as a member of the 34th Senate, Dr Clark remained in the Senate for five terms and was chairman of both the Stock and Stock Raising and Public Health Committees. He also was vice-chairman of Agricultural Affairs and Public Printing Committees.

Among the issues Dr Clark and his fellow legislators considered were three of particular interest to TMA members: a bill expanding the scope of optometry, a bill providing for a board of masseur examiners, and a bill providing for reorganization and extension of the power of the Board of Health.

When Rep Roger Byrne charged that he had been offered a bribe to support the optometry bill, it was withdrawn from the House. The masseur bill received little consideration, although the circumstances were not as dramatic. The Board of Health bill also failed.

Seven physician-legislators considered several bills concerning medicine-related subjects as members of the 35th Legislature, meeting in 1917. Among the Representatives was Oscar Davis, MD, who later served as Assistant State Health Officer and Director of the Bureau of Venereal Diseases, State Health Department. Dr Davis philosophized on the development of public health before the 1919 meeting of the Tex-

as Medical Association: "Among the many factors that in the past have, and in the future will continue to exert an influence in the development and progress of public health are, Instinct, Pride, Self-Protection, Commercialism, Philanthropy and Education."

HB 37 was included in a list of bills "of particular interest to the medical profession" in the April 1917 issue of the *Texas State Journal of Medicine*. The bill limited the speed of automobiles to 18 miles an hour in the country, 15 in the city and six on obscure roads, and required licenses for all automobiles to be obtained from the State Highway Commission and establishing an annual fee between $7.50 and $15 based on horse power.

J.A. Dodd Nash, MD, vice-chairman of the Public Health Committee, introduced the Eugenics bill to the 36th session in 1919. The bill proposed to make it illegal for a man to procure a marriage license without certification that he was free from venereal diseases. "Objections raised to the bill are that it examines only men, and that the conditions in this great rural State make such examinations impracticable . . ."

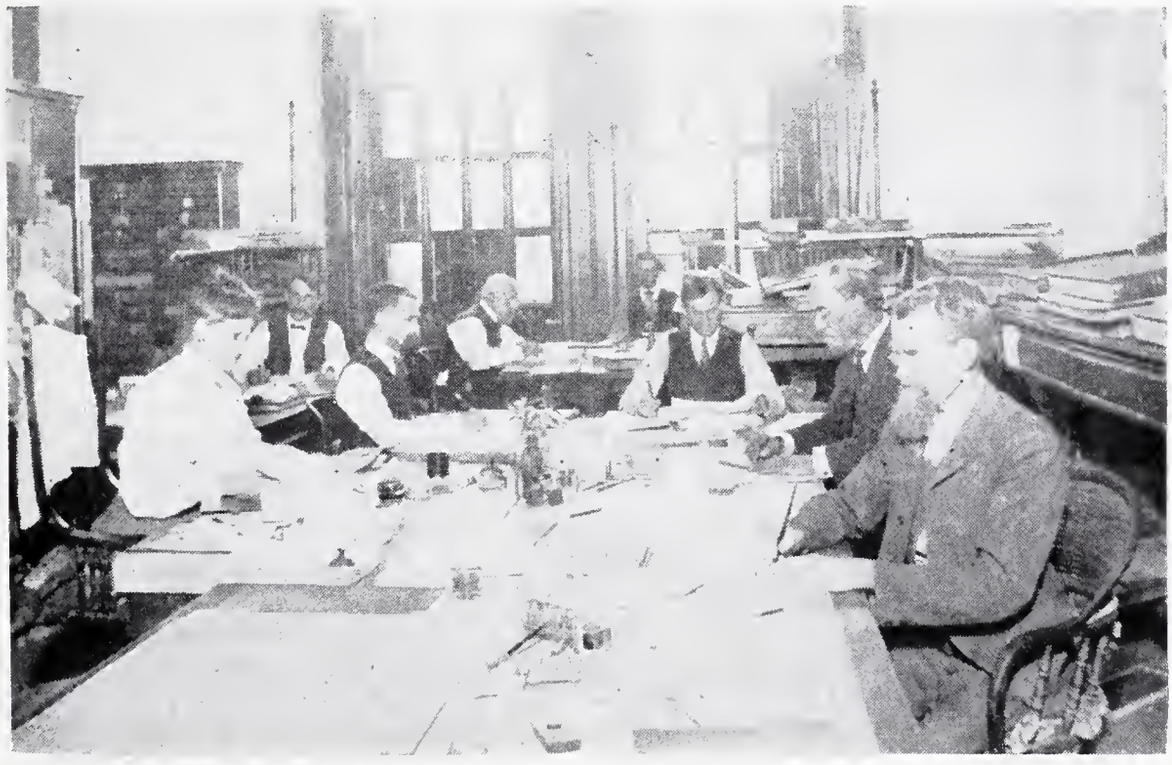
The 37th Legislature, meeting in 1921, enacted legislation regarding eye prophylactics for newborns, regulation of maternity homes, sanitary conditions in bakeries, physical examination of food handlers and regulation of barber shops and beauty parlors. This session of the legislature had three physician members.

J.H. Florence, MD, Houston, served in the 39th Session in 1925. He was appointed quarantine officer under the old State Quarantine Department, was assistant state health officer and was appointed state health officer in 1922.

Upon his appointment as state health officer, the February 1922 issue of the journal noted, "It is no easy matter to adequately fill the position of State Health Officer in Texas. The requirements are uncompromisingly high, if we are honest about it, and the salary is ridiculously low."

J.W.E.H. Beck, MD, DeKalb, who in 1932 was defeated for President-elect of TMA, served in the 41st, 42nd, 43rd and 44th Sessions of the Texas Senate.

Although no physicians have taken official positions as state legislators since the 45th Session adjourned, they continue to influence legislation as members of special advisory committees and as private citizens.



At work in the Texas Capitol in the early 1900s

The Chalberg Photo Collection
Austin-Travis County Collection
Austin Public Library, Austin, Texas

All oral bronchodilators are pretty much the same. Right? Wrong!

The difference is in their action—both before and after symptoms begin. That's the reason for TEDRAL®.

- □ effective and prolonged bronchodilation from the synergistic effect of ephedrine and theophylline
- □ β-ADRENERGIC ACTION RELAXES BRONCHIAL SMOOTH MUSCLE
- □ α-ADRENERGIC ACTION REDUCES BRONCHIAL EDEMA AND SECRETIONS
- □ dosage forms to meet individual patient needs

For proven performance...

Tedral® / Tedral® SA / Tedral® Elixir

Each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer), and 25 mg phenobarbital in the immediate release layer.

SUSTAINED ACTION

Each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine HCl, and 2 mg phenobarbital; the alcohol content is 15%.

See next page for brief summary.

WC **WARNER/CHILCOTT**
Division, Warner-Lambert Company
Morris Plains, New Jersey 07950 T-GP-72-B/

TEDRAL®

TEDRAL® SA Sustained Action

TEDRAL® Elixir

CAUTION: Federal law prohibits dispensing Tedral SA without prescription.

Description. Tedral: each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Tedral SA: each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer); 25 mg phenobarbital in the immediate release layer.

Tedral Elixir: each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine hydrochloride, and 2 mg phenobarbital; the alcohol content is 15%.

Indications. Tedral, Tedral SA, and Tedral Elixir are indicated for the symptomatic relief of bronchial asthma, asthmatic bronchitis, and other bronchospastic disorders. They may also be used prophylactically to abort or minimize asthmatic attacks and are of value in managing occasional, seasonal or perennial asthma.

Tedral SA (Sustained Action) offers the convenience of b.i.d. dosage.

Tedral Elixir is convenient for persons who may have difficulty in swallowing tablets.

These Tedral formulations are adjuncts in the total management of the asthmatic patient. Acute or severe asthmatic attacks may necessitate supplemental therapy with other drugs by inhalation or other parenteral routes.

Contraindications. Sensitivity to any of the ingredients; porphyria.

Warnings. Drowsiness may occur. PHENOBARBITAL MAY BE HABIT-FORMING.

Precautions. Use with caution in the presence of cardiovascular disease, severe hypertension, hyperthyroidism, prostatic hypertrophy, or glaucoma.

Adverse Reactions. Mild epigastric distress, palpitation, tremulousness, insomnia, difficulty of micturition, and CNS stimulation have been reported.

Average Dosage. *Prophylactic or Therapeutic.*

Tedral: *Adults*—One or two tablets every 4 hours. *Children*—(Over 60 lb) one-half the adult dose.

Tedral SA: *Adults*—One tablet on arising and one tablet 12 hours later. Tablets should not be chewed. *Children*—Not established for children under 12.

Tedral Elixir: Note: One teaspoonful is equivalent to *one-quarter* Tedral tablet. *Children*—One teaspoonful per 30 lb body weight, every 4-6 hours, unless preseribed otherwise by physician. Should be given to children under 2 years of age only with extreme caution. *Adults*—One to two tablespoonfuls every four hours.

Supplied. Tedral: White, uncoated seored tablets in bottles of 24 (N 0047-0230-24), 100 (N 0047-0230-51) and 1000 (N 0047-0230-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0230-11).

Tedral SA: Double-layered, uncoated, coral/mottled white tablets in bottles of 100 (N 0047-0231-51) and 1000 (N 0047-0231-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0231-11).

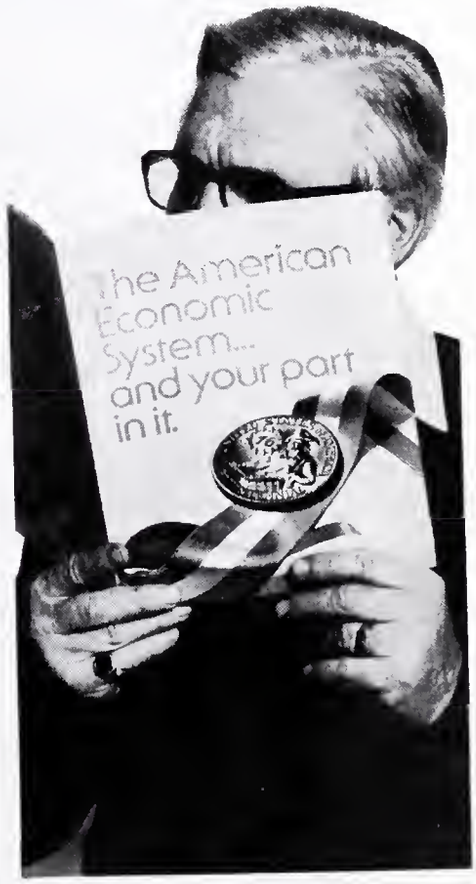
Tedral Elixir: Dark red and cherry-flavored in 474 ml (16 fl oz) bottles (N 0047-0242-16).

STORE BETWEEN 59° and 86°F (15° and 30°C).

Full information is available on request.

How much change does our American Economic System need: A lot? A little? None?

The more we all know about our system and how it works, the better we can decide what to preserve, what to change in the years ahead. That's why this special booklet has been prepared. Every American ought to know what it says. For a free copy, write: "Booklets," P.O. Box 1887, New York, N.Y. 10001.



A public service of The Advertising Council & U.S. Department of Commerce presented by this Magazine

Ad Council

Information for authors

Texas Medicine is a scientific, clinical journal published primarily for members of the Texas Medical Association. In addition, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, coming meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Scientific Articles

Manuscripts should be typed double-spaced with ample margins on firm paper. Two copies should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

References

Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrative Material

Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously Published Material

Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with the manuscript.

Editorials

Editorials should be prepared in the same general manner, and should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the Managing Editor and consultants.

News

News items should be sent to the Editorial Offices, 1801 North Lamar Blvd., Austin 78701.

Continuing Education, Meetings

Continuing education courses and medical meetings are listed in each issue. Information about courses should include title, sponsor, location, dates, duration, fee, how many may enroll, for whom the course is designed, teaching methods, type and number of hours credit, and name and mailing address of a person to contact.

Information about meetings should include the name of the organization, place and inclusive dates, and name and mailing address of a person to contact. Program topics and names of speakers may be included as space permits.

Material should be submitted in writing six weeks before publication; for example, information for the June issue (published June 1) is needed by April 15.

Obituaries

Obituaries of deceased TMA members are published if adequate information is received within four months of date of death. When notifying the editors of a member's death, please give the name and address of next of kin.

Policy on Columns

Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Scientific Publication Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the Committee and the editors will consider development of a column.

Editing

All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints

Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright

Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the Managing Editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

Point of View

Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

MEDICINE AND THE LAW

PHYSICIANS' COUNTERSUITS IN TEXAS

The following is to clarify TMA members' general perspective of physician countersuits under Texas law.

The medical professional liability insurance crisis has generated physician outcry for counterlitigation against malpracticing plaintiff attorneys and/or their clients who abuse the tort system by filing and pursuing groundless medical malpractice suits.
Physicians decry the lack of legal precedent, imposing upon plaintiff attorneys and/or clients a negligence-type liability for substandard conduct relative to lawsuits instigated against defendant doctors.
Physicians also disparage the stringent requirements of Texas case law for successful countersuits. The fervor of physician attitude has been fueled by the success in an Illinois trial court of a countersuit brought by Leonard Berlin, MD.
Part of the medical profession's frustration may be attributed to misunderstandings of the tort trial system and Texas law.
However, it also reflects bona fide differences of opinion, both medical and legal, regarding countersuits.

What is meant by a groundless, frivolous, specious, or nonmeritorius malpractice suit against a physician warranting counterlitigation? Not all doctors and lawyers use these terms in the same sense.
Probably, most would agree that such claims should include instances where a doctor, who had no real connection with the medical care at issue, is subjected to suit and trial. Less clear are the infinite variety of occasions where recovery is sought against a doctor on a medically unsound theory or without credible testimony by a qualified expert witness.

There are three legally distinct situations:
1. Where there is no evidence upon which to submit the plaintiff patient's case to a jury;
2. Where there is enough evidence for the case to go to the jury to be decided one way or the other, although the weight of the evidence appears to favor the doctor; and
3. Where the weight of such evidence preponderates against the doctor.
Only situation one has counterlitigation potential.

What else under Texas law must a countersuing physician be able to prove in order to prevail? The answer depends primarily upon which legal theory the doctor's counterlitigation is based.
The most viable theory for successful physician countersuit under Texas precedent is, in the opinion of TMA's General Counsel, malicious prosecution. However, the essential elements that must be proven to recover for malicious prosecution are stringent.
To prevail, the physician must prove not only that the counter defendants (plaintiff patient/counsel) caused the original malpractice suit to be filed and/or continued against the doctor, but also each of the following:
a. Termination of the malpractice suit in the physician's favor. As a consequence of this legal requirement, the patient's claim and the doctor's counteraction cannot be tried at the same time, and a settlement by the doctor precludes a successful countersuit.
b. Absence of probable cause for bringing and/or pursuing the malpractice suit. This means a groundless lawsuit. Probable cause, under ordinary instructions, is likely to be defined in terms of whether a reasonable person, given the pertinent facts, would believe that the defendant doctor had fallen below the applicable standard

of care; or, the existence of such facts and circumstances as would justify a belief in the mind of a reasonable person acting on the facts and circumstances within his or her knowledge that the defendant's doctor committed the alleged malpractice.

c. Presence of malice with respect to the malpractice suit. Such malice is commonly defined as either a wrongful motive coupled with wrongful acts willfully done to the injury of another; or, ill will, evil motive, or such gross indifference or reckless disregard of the rights of others as to amount to a wanton act.

d. Damages conforming to legal standards, including the possibility of an exemplary damage award. Compensatory damages should include increased professional liability insurance premiums. Exemplary damages, under standard instructions, are awarded in the jury's discretion as an example to others and as a penalty, or by way of punishment.

Proof of absence of probable cause and presence of malice are formidable hurdles for any countersuing litigant. They are rooted in traditional public policy favoring free access to our court system and consequent judicial disfavor of malicious prosecution suits, in general.

However, given an appropriate set of facts and circumstances, TMA's General Counsel believes that a malicious prosecution countersuit by an aggrieved doctor can and should be won against a malice-motivated plaintiff patient and/or plaintiff attorney. (An illustration of an appropriate test case situation is where it can be proved that a no connection doctor was joined in a malpractice suit against another doctor for tactical purposes, such as securing cross examination advantage, coercing testimony, or enhancing settlement prospects through increased liability insurance involvement.)

Other legal theories:

Libel/slander. This familiar tort is not available because an absolute privilege exists in Texas for written and oral communications made in the course of judicial proceedings.

Abuse of process. The scope of this tort is narrow, relating not to filing and maintenance of a suit, but to wrongful use of a process or writ issued in the course of a suit. Generally, essential elements are an ulterior purpose and a willful act constituting improper use of such process.

Barratry. Under the Texas Penal Code a person commits an offense if, with intent to obtain a benefit for himself or to harm another, he (among other things) institutes any suit or claim that he knows is false.

Where it can be proved that the patient/attorney knew from the start that the claim was groundless, it could be forcibly argued that violation of this criminal statute creates a private civil cause of action.

An advantage of this approach, when applicable, would be asserting it as a counterclaim in the medical malpractice action.

Negligence (willful/wanton). This is the new law theory that Dr Berlin successfully asserted at the Illinois trial court level. That case is on appeal.

If affirmed, a real breakthrough in physician counterlitigation will be accomplished. Texas courts could be urged to adopt this novel approach, but would not be bound to do so.

If the Berlin case is reversed on appeal, then the plaintiff bar will have a persuasive contra-precedent.

The rationale at issue is whether plaintiff patients/attorneys can be held liable to a countersuing doctor for willful and wanton litigation without reasonable cause and/or legal negligence in violating an asserted duty owing to the treating doctor not to sue him without reasonable prior investigation.

Conclusion

The ultimate decision by a particular physician as to whether or not to file counterlitigation against the original plaintiff patient/attorney is an individual one, not a TMA decision. For further information and appropriate consultation with respect to contemplated counterlitigation, TMA members should contact TMA's Committee on Professional Insurance, 1801 N Lamar Blvd, Austin 78701.

Jack Maroney, Will Barber
Brown, Maroney, Rose, Baker & Barber
TMA Legal Counsel

Medicine in literature

EDITOR'S NOTE: This month's bibliography, prepared by the staff of TMA's Memorial Library, lists articles related to countersuits. Copies of these and other articles pertaining to countersuits are available from the Memorial Library.

COUNTERSUITS

Berlin L: The most important countersuit victory yet. *Med Eco* 53(19):198-212, 1976.

Berlin L: The need for countersuits to balance the malpractice scales. *Am Med News* 19(32):6, 1976.

Countersuits becoming popular weapon for MDs. *Am Med News* 19(24):1, 1976.

Freidberg E: Attorney outlines considerations for doctors contemplating countersuits. *Malpractice Digest:* 1, September-October 1976.

Goldberg JH: Suing a malpractice plaintiff can boomerang. *Med Eco* 53(23):108, 1976.

Illinois physician wins countersuit. *Citation* 33(5):1, 1976.

Levine JI: I beat a malpractice blackmailer. *Med Eco* 53(4):65-71, 1976.

Medical society support; California countersuits backed. *Am Med News* 19(36):15, 1976.

Rau K: Behind the countersuit trend: Physicians' frustration and anger. *Am Med News* 19(26):1, 1976.

Reynolds JA: How plaintiff's attorneys view the countersuit tactic. *Med Eco* 53(20): 73-79, 1976.

Rhein RW Jr: Ways out of the malpractice mess. *Med World News* 17(16):38-56, 1976.

IN THE TMA LIBRARY

American Society of Internal Medicine: *Proceedings, Assessing Physician Performance in Ambulatory Care.* American Society of Internal Medicine, 1976.

Commission on Cancer, American College of Surgeons: *The Patient With Cancer, Guidelines for Follow-up.* Commission on Cancer, American College of Surgeons, 1976.

Committee on Trauma, American College of Surgeons: *Early Care of the Injured Patient,* ed 2. Philadelphia, WB Saunders Co, 1976.

Culbert ML: *The Fight for Laetrile, Vitamin B_{17}, Forbidden Weapon Against Cancer.* New Rochelle, NY, Arlington House, 1974.

Dunphy JE, Botsford TW: *Physical Examination of the Surgical Patient, An Introduction to Clinical Surgery,* ed 4. Philadelphia, WB Saunders Co, 1975.

Handa H (ed): *Microneurosurgery, International Symposium on Microneurosurgery, Kyoto, October 1973.* Baltimore, University Park Press, 1975.

Tietz NW (ed): *Fundamentals of Clinical Chemistry.* Philadelphia, WB Saunders Co, 1976.

Winkler WA: *Post-Mastectomy, A Personal Guide to Physical & Emotional Recovery.* New York, Hawthorn Books, Inc, 1976.

THIS SPACE PROVIDED BY THE PUBLISHER AS A PUBLIC SERVICE.

She's a graduate of Columbia with a Masters in literature.

She's a vice president of a publishing company.

She's watched television programs and read dozens of pamphlets and articles about early cancer detection.

She has relatives and close, personal friends who have had mastectomies.

She's about as aware of the need for breast self-examination as any intelligent woman could be.

Yet she does not get regular checkups nor does she even examine her own breasts.

Why? Because her doctor never told her to.

But 92% of the women who receive personal instruction from their doctors *do* regularly practice BSE.*
You don't have to be told how important early detection is. But maybe you need this reminder that a few personal words from you can often mean more than the millions of words that go into publicity and television programs.

*Based on a Gallup study conducted for the American Cancer Society.

american cancer society®

Photo: Ray Solowinski

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

T.E. CHRISTIAN
San Antonio, 1901-1976

J.J. ELLIOTT
Houston, 1916-1976

FOSTER FUQUA
Dallas, 1919-1976

J.E. PAGE
Dallas, 1921-1976

PAUL RIGNEY
El Paso, 1878-1976

W.M. STRICKLAND, JR
Dallas, 1928-1976

PETER ZANCA
San Antonio, 1908-1976

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

TEXAS MEDICAL MEMORIAL LIBRARY FUND

1801 N. Lamar Blvd., Austin, Texas 78701

I enclose the amount of $_____. Given in Memory of _____

Please send remembrance card to:

Name _____

Address _____

City and State _____

Donor Information:

Name _____

Address _____

City and State _____

***COMPULSION/ an irresistible impulse to perform an irrational act.**

Excessive drinking . . . leading to alcohol addiction . . . can't be controlled successfully unless the **compulsion** is destroyed.

Schick Hospital is a confirmed leader in modifying compulsive behavior and replacing it with **rational thinking and behavior**.

Aversive conditioning has been found to be the fastest, most effective means of breaking up compulsive drinking. Combined with rational behavior therapy, over half of the individuals who take a two-week re-education program never take nor feel the need to take another drink.

A 100% medically oriented program in a first class hospital fully accredited by the Joint Commission on Accreditation of Hospitals, and a Blue Cross-Blue Shield Member Hospital. Health and hospitalization insurance approved, including CHAMPUS.

SCHICK HOSPITAL

4101 Frawley Drive · Fort Worth, (D/FW Mid-Cities) 76118
Call for 24 hour information: Fort Worth (817) 284-9217 · Dallas (214) 589-0444

COMING SOON. Hospital programs for compulsive eaters and overweight individuals.
Hospital programs for compulsive smokers with pulmonary and cardiovascular disorders.

*Webster's New Collegiate Dictionary

Medical Newsmakers

MELVYN H. SCHREIBER, MD, has been named chairman of the Radiology department at The University of Texas Medical Branch at Galveston. Dr Schreiber has been a radiology professor at UTMB since 1967 and has been teaching at the medical school for 20 years. He is a past president of the Association of University Radiologists; a diplomate and guest examiner of the American Board of Radiology; a fellow of the American College of Radiology and the American College of Physicians.

GRANT F. BEGLEY, MD, is the 1976 recipient of the Gold-Headed Cane award given by the Tarrant County Medical Society. Dr Begley is the former chairman of the TMA Committee on Medicine and Religion.

WATARU W. SUTOW, MD, of Houston is a recipient of the 11th annual Health Memorial Award for "outstanding contributions to the better care of cancer patients." The award was presented by The University of Texas M.D. Anderson Hospital and Tumor Institute in November. Dr Sutow shares the award with FRANZ M. ENZINGER, MD, of Washington, D.C., known for his expertise in helping standardize cancer terminology. Dr Sutow is recognized for his work in chemotherapeutic management of childhood cancers, including acute leukemia, osteosarcoma, rhabdomysarcoma, and Wilms' tumor. He is a professor of pediatrics at M.D. Anderson Hospital and Tumor Institute.

JAMES D. MURPHY, MD, of Fort Worth, former Speaker of TMA's House of Delegates, was honored by the American Academy of Family Physicians for his years of effective service as parliamentarian to the Congress. Dr Murphy was presented the Academy's Award of Merit.

A 1931 Baylor College of Medicine graduate and Garland family physician for 40 years, TAYLOR T. PICKETT, MD, has established the first gift of endowment to the Baylor College of Medicine's Division of Family Practice. Dr Pickett, who graduated from Baylor University in 1927, has given $10,000 to the Baptist Foundation of Texas with the provision that monies earned from investments shall benefit the family practice program at Baylor College of Medicine in perpetuity. Currently clinical assistant professor of internal medicine at UT Southwestern Medical School, Dr Pickett was an instructor in internal medicine at Baylor University Medical School when it was located in Dallas. Dr Pickett, 70, is a past president of the Dallas Academy of Family Physicians.

Melvyn H. Schreiber, MD

BASIL A. PRUITT, JR., MD, has been elected Recorder of the American Association for the Surgery of Trauma for 1976-77. Dr Pruitt is the Commander and Director of the U.S. Institute of Surgical Research at the Brooke Army Medical Center, Fort Sam Houston, Texas.

Taylor T. Pickett, MD

JOHN P. McGOVERN, MD, of Houston, has been honored by the Duke University Medical Center for distinguished professional career. Dr McGovern, director of the McGovern Allergy Clinic in Houston, also holds multiple appointments at the Baylor College of Medicine and at the University of Texas Graduate School of Biomedical Sciences.

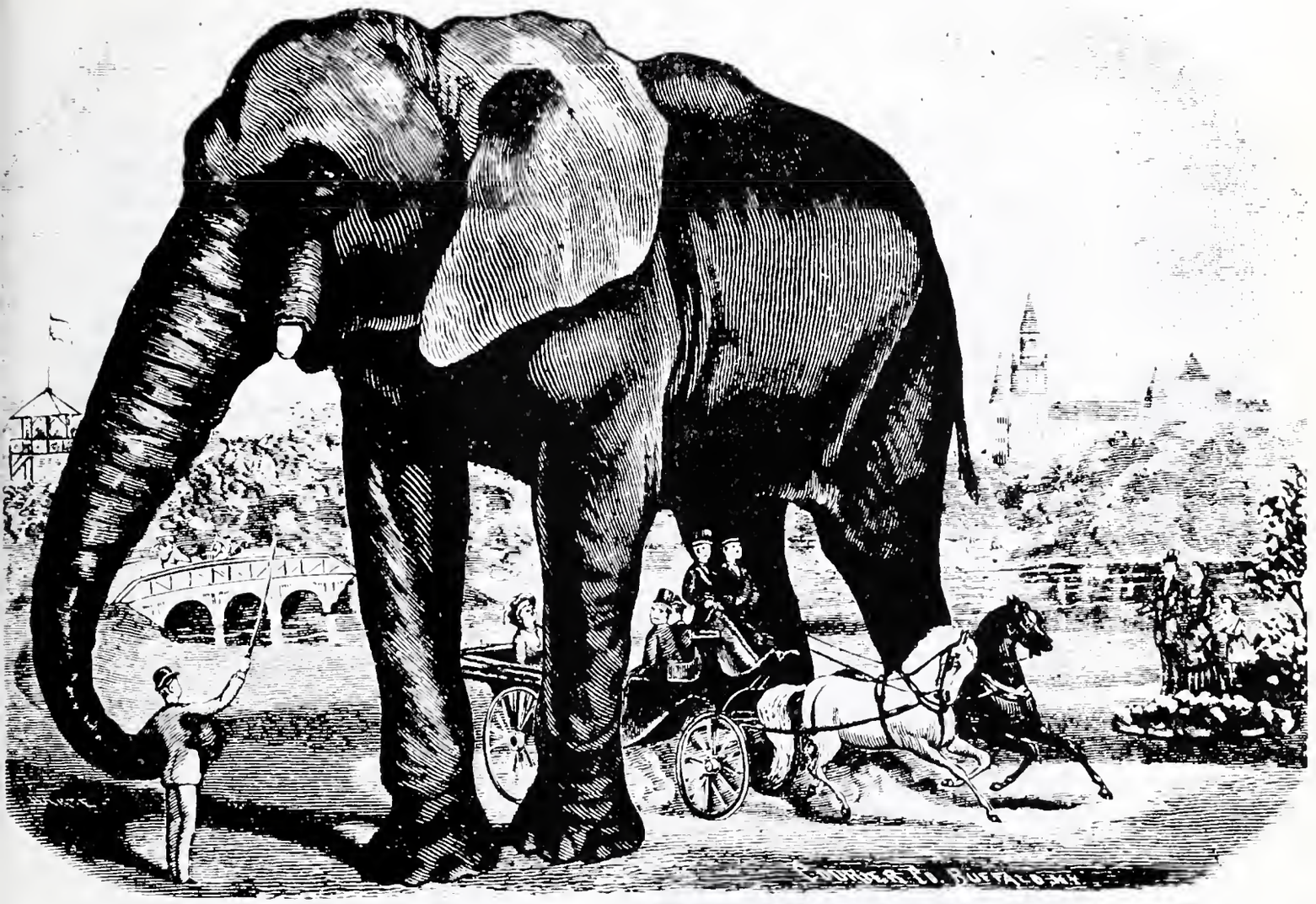
The principal member of a research team that formulated a four-drug regimen for the treatment of Hodgkin's disease has been honored by The University of Texas M.D. Anderson Hospital and Tumor Institute. VINCENT T. DEVITA, JR., MD, clinical director and director of the Division of Cancer Treatment at the National Cancer Institute, received the first annual JEFFREY A. GOTTLIEB Memorial Award. The award is named for Dr Gottlieb, former chief of M.D. Anderson's chemotherapy service.

M.T. JENKINS, MD, chairman of anesthesiology at Southwestern Medical School, The University of Texas Health Science Center at Dallas, has been appointed to the liaison committee on graduate medical education of the American Medical Association.

MICHAEL M. WARREN, MD, associate professor of surgery and chief of the urology division at The University of Texas Medical Branch at Galveston, is the first recipient of the Robert Earl Cone Professorship in Urology. Dr Warren received his urology training at the Mayo Clinic. He is involved in research concerning disease of the prostate gland which can cause destruction of kidney function.

Two physicians, ARLIN B. COOPER, MD, of El Paso, and SHANNON GWIN, MD, of Corpus Christi, have been awarded the distinguished Service Award of the Texas District Branch of the American Psychiatric Association. Dr Cooper was given the award for meritorious service in medicine and psychiatry from 1936 to 1976, and Dr Gwin was given the award for meritorious service in medicine and psychiatry from 1951 to 1976.

The Robert Koch Foundation awarded the Robert Koch prize for medical research to PROF RICHARD A. FINKELSTEIN of the University of Texas Health Science Center at Dallas, and PROF MARK H. RICHMOND of the University of Bristol. Finkelstein, 46-year-old native of New York, shared the $25,000 cash prize which accompanies the medal awarded by the West German foundation named for the German physician and bacteriologist who won the Nobel Prize for physiology and medicine in 1905.



See The Motorcycle ?

You may not find a motorcycle in this picture, but you'll find plenty of them on Texas' streets and highways.

The trouble is, not enough automobile drivers are seeing motorcycles when they should. Not until it's too late, anyway.

Maybe if motorcycles were as big as elephants, you'd be more careful when you see them. But nothing is bigger than human life. And that's what we're really asking you to look out for.

CycleSafe

The Governor's Office of Traffic Safety

Recent deaths

Dr Christian

Dr Elliott

T.E. Christian, MD

Dr Thomas Edward Christian, a former Bexar County Health Physician, died June 24, 1976, in San Antonio.

Dr Christian, 74, was a consulting physician for the San Antonio Independent School District for 10 years, and had served as physician for high school and college athletic teams for 40 years.

The general practitioner was a native of Abilene. He was graduated from Hardin-Simmons University, Abilene, in 1923 with a bachelor of arts degree. In 1926 he completed his MD at The University of Texas Medical Branch, Galveston. His internship was at Robert B. Green Memorial Hospital, San Antonio, during 1926-1927.

Dr Christian's professional memberships included the American College of Surgeons, Bexar County Medical Society, American Medical Association and Southwest Medical Association.

The doctor is survived by his wife, Dorris Stubbs Christian; sons, Thomas A. Christian and Davis Stubbs Christian; and daughter, Mary Elizabeth Christian, all of San Antonio; a brother, Jack Christian, of Littlefield, Tex, and two grandchildren.

J.J. Elliott, MD

Dr John Joseph Elliott, a 30-year resident of Houston, died July 12, 1976, at the age of 59.

Dr Elliott, an obstetrician-gynecologist, was a mernber of the staff of St Luke's Episcopal Hospital.

The native of Winnipeg, Manitoba, Canada, was a 1935 graduate of the University of Manitoba. He received his MD from the University of Manitoba Medical Faculty in 1940.

His internship was at Winnipeg (Manitoba, Canada) General Hospital (1939-1940), and his residency was at Lewis Memorial Maternity Hospital in Chicago (1940-1941).

Dr Elliott was a member of St Michael's Catholic Church and the River Oaks Country Club. His professional memberships included the Houston Obstetrical and Gynecological Society, Harris County Medical Society, American Medical Association, Catholic Physicians Guild, Texas Association of Obstetrics and Gynecology (fellow), American Society of Abdominal Surgeons (fellow), American College of Obstetricians and Gynecologists (fellow) and American Fertility Society. He also was a member of Delta Kappa Epsilon fraternity.

Surviving Dr Elliott are his wife, Peggy Carlyle Elliott; and daughter, Mrs Dana A. Curtis, both of Houston; sons, Judge Joseph C. Elliott, San Antonio, and Peter C. Elliott, Lake City, Colo; brother, George Robert Elliott, West Covina, Calif; two grandsons; one niece and one nephew.

Foster Fuqua, MD

Dr Foster Fuqua, a Dallas urologist, died July 2, 1976.

Dr Fuqua, 57, was a clinical professor of urology at The University of Texas Southwestern Medical School, chief of the department of urology at Baylor University Medical Center, director of the urological section at Children's Medical Center and a member of the urological staffs of Parkland Memorial, Presbyterian and Scottish Rite hospitals.

The physician was a native of Hamilton County, Texas. He was graduated from Baylor University, Waco, with a BS degree. In 1943 he received his MD from Baylor

College of Medicine. He completed both a rotating and general surgery internship at Parkland Memorial Hospital, Dallas. During World War II, Dr Fuqua served in the US Army Medical Corps as a captain. He returned to Dallas in 1947 to take a urology residency at Parkland. He began his private practice of urology in Dallas in 1949.

Dr Fuqua's professional memberships included the Dallas County Medical Society, American Medical Association, American Urological Association, Southern Medical Association, American College of Surgeons and the Pan American Medical Association Society of University Urologists. He was the president of the medical staff at Children's Medical Center, Dallas, during 1972, and was a former president of the Society for Pediatric Urologists.

He served as secretary of the South Central Section of the American Urological Association from 1974 to 1976 and as president-elect of the urological section of the American Academy of Pediatrics during 1975-1976. He also was a member of the Dallas Salesmanship Club, Dallas Country Club and Preston Trail Golf Club.

Surviving are his wife, Ann Shelby Duckworth Fuqua; son, Lee Foster Fuqua; daughters, Suzanne West and Shelby Ann Fuqua, all of Dallas; his mother, Mrs Bertie Fuqua of Hamilton, Tex; two brothers, William Fuqua, Jr, MD, Dallas, and R.O. Fuqua, MD, Sweetwater, Tex; and two sisters, Mrs Jay Edimiston, Plainview, Tex, and Mrs Marsh Belcher, Hamilton, Tex.

J.E. Page, MD

Dr Judge Edwards Page, co-founder and chairman of the Board of the Forest Avenue Clinic and Hospital, Inc, the first black-oriented medical facility in Dallas, died July 5, 1976.

Dr Page was born in Latta, SC, in 1921. He received his undergraduate education at Lincoln University, Lincoln, Pa. In 1948, he was graduated from Meharry Medical College in Nashville, Tenn. He served internships at Harlem Hospital Center, New York City, and at Community General Hospital in Reading, Pa. Before beginning his family practice in Dallas in 1961, he had maintained an anesthesia practice in Reading for 10 years.

The physician was a private in the US Army during World War II and was a captain with the 45th Mobile Army Surgical Hospital in Korea from 1953 to 1954.

Dr Page was a member of the Dallas County Medical Society, American Medical Association, American Society of Anesthesiologists, National Medical Association, American Academy of Family Physicians, C.V. Roman Medical Society and the Lone Star State Medical Society.

He was a life member of Alpha Phi Alpha fraternity and the National Association for the Advancement of Colored People and a member of the Boards of Trustees of the Park South YMCA and the Metropolitan YMCA. He also held memberships in the Black Chamber of Commerce, Knights of Pythias and Fraternal Order of Elks. He was a Master Mason, Most Worshipful Prince Hall Grand Lodge of Texas.

Surviving Dr Page are his wife, Jessie Barnes Page; daughters, Valerie and Lisa Page; and son, Jeffery Page, all of Dallas.

Paul Rigney, MD

Dr Paul Rigney, 98, died Aug 6, 1976. Dr Rigney, who retired from his practice in 1973, had lived in El Paso 59 years.

Dr Rigney was born in Gurley, Ala, in 1878. He was graduated from Alabama Polytech-

Dr Strickland

Dr Zanca

nic Institute, Auburn, with a BS degree in pharmacy in 1903. In 1907 he completed his MD degree at Tulane University School of Medicine, New Orleans. He was involved in postgraduate studies at the Mayo Clinic, Rochester, Minn, (1909) and New York University Postgraduate Medical School and Polyclinic Division Hospital, New York (1910). He practiced 10 years in Courtland, Ala, before moving to El Paso, where he practiced 56 years.

Dr Rigney had been a member of the First Baptist Church since 1917. His professional memberships included the El Paso County Medical Society and American Medical Association.

The surgeon is survived by his wife, Vera Hunt Rigney, El Paso; sons, Paul Rigney, Jr, Bartow, Fla, and James C. Rigney, Racine, Wis; daughter, Ann Rigney Ziller, Washington, DC; brothers, Joe W. Rigney, Mesilla Park, NM, and John Richard Rigney, New Market, Ala; seven grandchildren and two great-grandchildren.

W.M. Strickland, Jr, MD

Dr William Marvin Strickland, Jr, died Aug 7, 1976, while vacationing in Amsterdam.

Dr Strickland, 47, was a Dallas surgeon. He was affiliated with St Paul, Parkland Memorial, Medical City Dallas and Granville C. Morton Cancer and Research hospitals.

Dr Strickland received his undergraduate education at Texas Christian University in his native city, Fort Worth. He was graduated from The University of Texas Southwestern Medical School in 1951, and held a surgery internship and residency at Parkland Memorial Hospital. After serving as a major in the US Air Force for two years, he returned to Dallas to complete a surgery fellowship at Parkland in 1958.

Dr Strickland was a member of the Dallas County Medical Society, American Medical Association, International College of Surgeons, American Federation of Clinical Research, American Board of Surgery, American College of Angiology and American Society of Abdominal Surgeons.

Surviving are Dr Strickland's son, Marty Strickland, Dallas; and mother, Alma Strickland, Fort Worth.

Peter Zanca, MD

Dr Peter Zanca, 67, professor of radiology since 1967 and first chairman of the department at The University of Texas Health Science Center at San Antonio, died July 31, 1976, following a heart attack.

Dr Zanca, a native of New York City, was the author of more than 100 scientific papers. He also contributed to several radiology textbooks and was noted for his award-winning radiology exhibits.

The doctor attended New York University in Washington Square, NY, and Long Island University in Brooklyn, before entering the University of Rome Medical School in Italy. He received his MD in 1935.

His internship was at St Joseph's Hospital, Lancaster, Pa, during 1936-1937. Dr Zanca held residencies at the American Oncologic Hospital, Philadelphia; Oliver General Hospital, Augusta, Ga; and Letterman Army Medical Center, San Francisco. He received a fellowship from New York University Postgraduate Medical School (Bellevue Hospital), in 1946.

Dr Zanca was a retired colonel in the US Army Medical Corps, having served 30 years. Among the medals he received was the Legion of Honor with oak leaf cluster.

His professional memberships included the American College of Radiology (fellow), American Radiological Society, Radiological Society of North America, American Roentgen Ray Society, New York Academy of Science, American Medical Association and Bexar County Medical Society.

Surviving are Dr Zanca's wife, Margaret Quaid Zanca, San Antonio; sons, Joseph H. Zanca of Denver, William S. Zanca of Washington, DC, and John E. Zanca and David G. Zanca, both of San Antonio; three brothers, two sisters and four grandchildren.

BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT-OUTPATIENT
DEPARTMENT OF ADOLESCENT PSYCHIATRY

A Private 115 bed psychiatric hospital located in Oak Cliff on 18 acres amidst natural wooded surroundings. A multi-approach treatment center of neurologic and all psychiatric disorders. Treatment modalities include Somatic Therapy, Milieu Therapy, Chemotherapy, Individual and Group Therapy and Behavior Modification. Complete facilities for OT-RT under the division of trained personnel. An individually directed program based on full diagnostic evaluation and actual performance administered by a staff skilled in special education and problems of the adolescent and young adult.

PSYCHIATRY

Jackson H. Speegle, M.D.
Fred H. Jordan, M.D.

Joseph H. Lindsay, M.D.
John T. Holbrook, M.D.

PSYCHOLOGY

George R. Mount, Ph.D.

Tom I. Payton, M.S.
Patrick R. Barnes, M.S.

DIRECTOR OF NURSES
Nita Ivey, R.N.

DIRECTOR OF EDUCATION
William E. Nix, Ph.D.

SOCIAL SERVICES
Beth Rutherford, M.S.W.

COURTESY STAFF

O.T. AND R.T. THERAPY
Director
Chequita Dian Badger, B.S.

1353 N. WESTMORELAND AVENUE, DALLAS, TEXAS 75211 **214 331-8331**

Texas Physicians' Directory

Clinics

THE FORT WORTH CLINIC
1221 West Lancaster Avenue, Fort Worth, Texas 76102
Telephone 817 336-7191

INTERNAL MEDICINE
Kendra J. Belfi, M.D.
John M. Church, M.D.
Thomas J. Coleman, M.D.
Robert R. Dickey, M.D.
Ferd E. Garrison, Jr., M.D.
Cortell K. Holsapple, M.D.
John E. Johnson, Jr., M.D.
O. M. (Jack) Phillips, M.D.

GENERAL SURGERY
John H. Sewell, M.D.
Robert L. Sewell, M.D.

ORTHOPEDIC SURGERY
Thomas E. Rapp, M.D.

CONSULTANTS IN RADIOLOGY
Victor E. McCall, M.D.
Dixon Presnall, M.D.
Harry H. Whipp, M.D.

FIFTH AVENUE CLINIC
650 Fifth Avenue, Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etler, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

THOMAS-SPANN CLINIC
1533 South Brownlee, Corpus Christi, Texas 78404
Telephone 883-7411

FAMILY MEDICINE
Travis B. Phelps, M.D., F.A.A.F.P.
T. D. Harvey, M.D., A.B.F.P.
H. R. Rose, M.D., A.B.F.P.
C. L. Vernor, M.D.
Frederick S. Maurer, M.D.

ORTHOPEDICS
C. M. Yanez, M.D., F.A.C.S.

INTERNAL MEDICINE
G. A. Reeves, M.D.
Pruett Moore, Jr., M.D.
Mark G. Strauss, M.D.

ADMINISTRATOR
Gene Hybner

DIRECTOR OF NURSES
Pat Parker, R.N.

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

Internal Medicine
C. M. Maruri, M.D.
A. J. Nodarse, M.D.

General Surgery
B. W. Hink, M.D., F.A.C.S.

Family Medicine
J. H. Cochrane, Jr., M.D., F.A.A.F.P.
J. W. O'Bryant, M.D.
A. A. Piske, M.D.

Family Medicine and General Surgery
Salvador Faus, M.D.

Clinic Manager
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

Remind your colleagues of your specialty and office location.
Purchase a listing in the "Texas Physicians' Directory."

MALONE AND HOGAN CLINIC
1501 West 11th Place, Big Spring, Texas 79720, Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.
W. B. Allensworth, M.D.

GENERAL SURGERY
C. B. Marcum, M.D., F.A.C.S.
J. E. Mathews, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
C. T. Moore, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
D. M. Logan, M.D.
V. T. Smith, M.D.

FAMILY PRACTICE
W. R. Strahan, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.
J. W. Kuykendall, M.D.

PEDIATRICS
J. M. Woodall, M.D.
B. R. Owen, M.D., F.A.A.P.

RADIOLOGY & NUCLEAR MEDICINE
Buerk Williams, M.D.

UROLOGY
G. F. Dillon, M.D., D.A.B.U.
J. W. Cowan, M.D.

DERMATOLOGY
H. K. Butler, M.D.

PODIATRY
Bradford Glass, D.P.M.

CONSULTANT IN ELECTROENCEPHALOGRAPHY
M. L. Proler, M.D.

ADMINISTRATION
R. L. Heith, Administrator
Charles N. Butts, Fiscal Officer
H. L. Mott, Office Manager
Danny Nichols, Comptroller

RUGELEY AND BLASINGAME CLINIC
2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Richard R. Raphael

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.

DERMATOLOGY
T. S. Arrington, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

ANESTHESIOLOGY
C. G. Spears, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kleier, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

CLINIC OF THE SOUTHWEST ASSOCIATES
6437 High Star at Hillcroft, Houston, Texas 77036
Telephone 774-7671

INTERNAL MEDICINE
William C. Franklin, M.D.
Arthur B. Conde, M.D., F.A.C.A.

OBSTETRICS & GYNECOLOGY
Joy L. Deere, M.D.
Loren B. Goss, M.D.

PEDIATRICS
John R. Dunn, Jr., M.D.
Blanca S. Azlos, M.D.

PHYSICAL THERAPY
Richard D. Tinsley, R.P.T.

GENERAL SURGERY
Harvey B. Koch, M.D.

UROLOGY
Glen E. Lewis, M.D.

DENTISTRY
Burley G. Ingram, D.D.S.

RADIOLOGY
Richard E. Schuette, M.D.
Fred C. Hodges, M.D.

BUSINESS MANAGER
G. G. Fonville, M.H.A.

DIAGNOSTIC CLINIC OF HOUSTON

6448 Fannin, Houston, Texas 77030
Telephone 713 797-9191

Internal Medicine and Diagnosis

ALLERGY
Arthur T. Pedersen, M.D.

CARDIOVASCULAR DISEASE
Thomas J. Fatherree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.
Bogusław Godlewski, M.D.
Matthew T. Monroe, M.D.

DERMATOLOGY
Samuel F. Bean, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Raymond L. Gregory, M.D.
R. Frederick Gregory, M.D.
Thomas J. Hanson, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.
Michael Gagliardi, M.D.
James K. Gordon, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George T. Conklin, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
George Burnazian, M.D.
Benjamin L. Portnoy, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.
James V. Ryan, M.D.

NEPHROLOGY
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

NEUROLOGY
Donald J. Russell, M.D.
George Isaacs, M.D.
Ernesto Infante, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.
Harry R. Price, M.D.
Edward L. Middleman, M.D.
Martin J. Hrgovic, M.D.

PATHOLOGY
Paul B. Radelat, M.D.
Ashok M. Balsaver, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.
Martin L. Kaplan, M.D.
Louis C. Waddell, Jr., M.D.

RADIOLOGY
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.
Joe B. Wilson, M.D.
Howard J. Pollock, M.D.

NUCLEAR MEDICINE
Donald A. Podoloff, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
Robert B. Hall,
Administrator
Richard V. Vanderslice,
Assistant Administrator

HOUSTON HEADACHE CLINIC

Park Plaza Professional Building
1213 Hermann Drive, Suite 855
Houston, Texas 77004
(713) 528-1916

Neurology

Ninan T. Mathew, M.D., F.R.C.P.(C)

Allergy

PETER B. KAMIN, M.D., P.A.

Certified American Boards of Pediatrics and Allergy
Diplomate American Board of Allergy and Immunology

Allergy and Immunology

Suite 601, Oak Hills Medical Building
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Phone 512 696-4405 or 227-6331

HOUSTON ALLERGY CLINIC

Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Richard H. Jackson, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Warren J. Raymer, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
D. W. Waddell, M.D., F.A.A.C.I.A.
Ramon Garrido, M.D., F.A.C.A., F.A.A.C.I.A.*
(Certified American Board of Pediatrics)
*Diplomate American Board of Allergy & Immunology

Suite 444, Hermann Professional Building
6410 Fannin St., Houston, Texas 77030, 713 - 797-0900

TMA Group Insurance Plans

. . . Another service of your association

McGOVERN ALLERGY CLINIC

Diagnosis and Treatment of Allergic Diseases

JOHN P. McGOVERN, M.D.
Director-Consultant

THEODORE J. HAYWOOD, M.D.
ORVILLE C. THOMAS, M.D.
JOSEPH T. QUENG, M.D.
LAWRENCE G. THORNE, M.D.
K. VENUGOPALAN, M.D.
ROBERT E. SMITH, M.D.
JAMES A. AYERS, M.D.
EUNICE W. CHOU, M.D.
ALBERT LEHMANN, M.D.
GERALD T. MACHINSKI, M.D.

Research Associates
MICHAEL H. SMOLENSKY, Ph.D.
ALAIN REINBERG, M.D., Ph.D.
CALVIN J. McLERRAN, Ph.D.
MICHAEL A. McCORMICK, Ph.D.

Consultants

EVAN M. HERSH, M.D.
JUDITH H. MARSTON, Ph.D.
Immunology

JAMES A. KNIGHT, M.D.
Psychiatry

HERBERT C. McKEE, Ph.D.
RICHARD K. SEVERS, Ph.D.
Air Pollution

CAROLYN S. LEACH, Ph.D.
Clinical Laboratories

JOHN A. THOMAS, Ph.D.
Clinical Pharmacology

THOMAS D. DOWNS, Ph.D.
Biometrics

WARREN E. SCHALLER, H.S.D.
Allied Health Sciences

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025, (713) 661-1444

CORPUS CHRISTI ALLERGY CLINIC

Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology

2530 Morgan, Corpus Christi, Texas, 882-3487

STUART ALAN MASON, M.D., P.A.

Fellow American Association for Clinical Immunology and Allergy
Fellow of the American College of Allergists

Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

ALLERGY AND IMMUNOLOGY

Joseph T. Sams, M.D., P.A. or C. David Meadows, M.D., P.A.
Diplomates of the American Board of Allergy and Immunology

900 W. Randol Mill Rd., Suite 215, Arlington, Texas 76012, 817 277-1161

CHARLES A. RUSH, JR., M.D.

Diplomate/American Board of Allergy & Immunology

Northeast Medical Clinic Association
7601 Glenview Drive
Fort Worth, Texas 76118

V. E. FRIEDEWALD, M.D., F.A.C.P.

Diplomate American Board of Allergy and Immunology

Allergy

2203 West Tennessee, Midland, Texas 79701, 682-5385

Anesthesiology

HOUSTON PAIN CLINIC

ALEX M. STRAJA, M.D., F.R.C.P.(C), F.A.C.A.
Practice Limited to Treatment of Chronic Pain Syndromes and Nerve Blocks

Practice by Referral Only
Medical Towers, 6608 Fannin, Suite 1417
Houston, Texas 77030 Phone: 713 797-1681

TMA Members' Retirement Trust (Keogh)

. . . Another service of your association

Colon & Rectal Surgery

ALVIN BALDWIN, JR., M.D.
Diplomate American Board of Colon and Rectal Surgery

R. D. DIGNAN, M.D.
Diplomate American Board of Surgery
Diplomate American Board of Colon and Rectal Surgery

Suite 1209 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246
Telephone 824-2573

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery

2715 Fannin Street, Houston, Texas

C.D.L. CROMAR, M.D., M.S., F.R.C.S.E., F.R.C.S.C.
Surgery of the Rectum and Colon

Suite 8, 3337 Plainview, Pasadena, Texas 77504

SOMMAI SEHAPAYAK, M.D.
Diplomate American Board of Colon and Rectal Surgery
Diseases and Surgery of the Colon and Rectum and Fiber-optic Colonoscopy

Medical Tower, Suite 210, 1550 West Rosedale,
Fort Worth, Texas 76104, 817-338-4501 (24 hours)

SUVID PITA, M.D.
Colon and Rectal Surgery
Colonoscopy

Barnett Tower, Baylor Medical Plaza
3600 Gaston Ave, Suite 411
Dallas, Texas 75246
Telephone 214 821-4300

MANUEL G. LAGON, M.D., F.A.C.S.
Diplomate American Board of Colon and Rectal Surgery

FORT WORTH COLON AND RECTAL CLINIC, P.A.
Colonoscopy, Colon and Rectal Surgery

909 Eighth Avenue, Fort Worth, Texas 76104; Telephone 332-1371

MEMORIAL LIBRARY
TEXAS MEDICAL ASSOCIATION

1801 North Lamar Blvd., Austin, Texas 78701, 512 477-6704

A clinical library designed to assist the practicing physician

50,000 bound volumes ● extensive reprint and periodical collection ● 400 lay and professional films ● pathological slide sets ● cassette and reel-to-reel tapes from AMA, Audio Digest ● MEDLINE computer data service

. . . Another service of your association

Dermatology

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy

1400 Eighth Street, Wichita Falls, Texas

DRS. PIPKIN AND RESSMANN
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies

714 Medical Arts Bldg., San Antonio, Texas 78205

J. GILMORE BRAU, M.D.
Dermatology and Syphilology
X-Ray and Radium Therapy
Hours 9 to 1—3 to 5
3817 Brown Street, Dallas, Texas

JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
A Professional Association
Dermatology, Syphilology, and Cancer of the Skin

3801 19th St., Suite 500, Lubbock, Texas 79410

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies

7777 Forest Lane, Suite 214, Dallas, Texas 75230; Phone 661-7460

GERALD A. CASID, M.D., P.A.
Skin Diseases—Skin Tumors
Hair Transplantation, Dermabrasion, Chemical Peels

333 N. Shiloh Rd., Garland, Texas 75042
Phone 214-272-5451

DAVID S. ALKEK, M.D. AND ASSOCIATES
Dermatology and Cancer of the Skin
Dermabrasion and Chemical Peel

8226 Douglas Avenue, Suite 755
Dallas, Texas 75225
Ph: 214-691-6691

Texas Medicine

Present your ideas in Texas Medicine

For details on submitting manuscripts,
send for a copy of "Information for Authors."
Mrs. Marilyn Baker
Managing Editor
TEXAS MEDICINE
1801 North Lamar Blvd.
Austin, Texas 78701

Endocrinology

ENDOCRINE ASSOCIATES OF DALLAS, P.A.
STANLEY FELD, M.D.
RICHARD SACHSON, M.D.
Practice Limited to Endocrinology

Douglas Plaza Bldg., Telephone: 363-5535
8226 Douglas Avenue, Dallas, Texas 75225

Eye, Ear, Nose, Throat

DRS. NALLE, ELLSASSER AND CLAYTON
Eye and Allergy of the Ear, Nose and Throat

Ernest Nalle, Jr., M.D., DAB Oto., F.A.C.S., F.I.C.S.
M. G. Ellsasser, M.D., DAB Oph.
Miles G. Clayton, M.D., Oph.

1312 Main Street Lubbock, Texas 79401, 806 762-8771

Family & General Practice

GLENN C. COATES, M.D.*
GENE V. HAVERLAH, M.D.
SAM A. NIXON, M.D.*
EUGENE M. TOKAR, D.D.S.

1303 Hospital Blvd., Floresville, Texas 78114, 512 393-2527
*Diplomate American Board of Family Practice

SAMUEL SILVA, M.D.
Hair Transplantation

4759 South Freeway, Fort Worth, Texas 817 923-7374

Gastroenterology

CECIL O. PATTERSON, M.D., F.A.C.P.
DAVID E. LANGDON, M.D., F.A.C.P.
Gastroenterology, Gastroscopy, Esophagoscopy, and Colonoscopy
1414 Medical Arts Building, Dallas, Texas, 742-6141-44

MILFORD O. ROUSE, M.D., F.A.C.P.
Consultations in hospitals only

DRS. BAILEY, DOUGLAS AND DEVANEY ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System

Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
George T. DeVaney, M.D.

General Surgery

BURT B. SMITH, M.D., F.A.C.S.
Surgery
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery

728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

TMA Physicians Benevolent Fund
. . . Another service of your association

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery

1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Thoracic Surgery
Vascular, General and Thoracic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue,
Dallas, Texas 75246, 821-2356

ROBERT J. TURNER, III, M.D., F.A.C.S.
Diplomate American Board of Surgery
General and Peripheral Vascular Surgery

The Saint Joseph Professional Building
1400 South Main Street, Suite 104
Fort Worth, Texas 76104, 335-8311

ROBERT M. STECKLER, M.D.
Diplomate American Board of Surgery
Head and Neck Surgery, Surgery, and Surgical Oncology

Baylor Medical Plaza, Suite 1008, 3600 Gaston Avenue,
Dallas, Texas 75246, 214 827-9880

ROBERT DAVIS, M.D., M.B., B.Ch. (Rand), F.R.C.S. (Edin.)
General Surgery

430 Park Plaza Professional Building, 1213 Hermann Drive,
Houston, Texas 77004; 713 528-0597
By Appointment

Hand Surgery

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopaedic Surgery
PETER R. CARTER, M.D.
Hand Surgery and Upper Extremity Reconstructive Surgery

Baylor Medical Plaza, Barnett Tower, Suite 802, 3600 Gaston Avenue
Dallas, Texas 75246, 214 823-5351

Neurological Surgery

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery

Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Morris Sanders, M.D.
Phillip E. Williams, Jr., M.D.
Ira C. Denton, Jr., M.D.
W. Robert Hudgins, M.D.
Jack Woolf, M.D., Consultant

5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620,
Dallas, Texas 75235; 214 637-0420

8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905,
Dallas, Texas 75231; 214 369-7596

3600 Gaston Avenue, Barnett Tower, Baylor Medical Plaza, Suite 310,
Dallas, Texas 75246; 214 826-1976

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
Neurological Surgery

8210 Walnut Hill Lane, Suite 805, Dallas, Texas 75231, 363-8524

RONALD SMITH, M.D.
Neurological Surgery

901 South Lake, Fort Worth, Texas, 336-0551

CHERRY-LONG NEUROSURGERY ASSOCIATION
GLENN R. CHERRY, M.D., D.A.B.N.S., F.A.C.S.
R. GORDON LONG, M.D., D.A.B.N.S., F.A.C.S.
Neurological Surgery

Baylor Medical Plaza — 605 Barnett Tower
3600 Gaston Avenue — Dallas, Texas 75246
Telephone 214 826-7060

EL PASO NEUROLOGICAL INSTITUTE
Professional Association

Neurology, Neurosurgery, Electroencephalography
Neuro-Radiology, Physiotherapy

William J. Nelson, M.D., Neurosurgery
John T. O'Neal, M.D., Neurosurgery
Robert D. Schneider, M.D., Neurology and Electroencephalography
Steven K. Crouse, M.D., Neurology and Electroencephalography

Medical Plaza Bldg., Suite 307
El Paso Medical Center
1501 Arizona Avenue, El Paso, Texas 79902
Telephone 915 532-8901

TEXAS NEUROLOGICAL INSTITUTE AT DALLAS, P.A.

Neurological Surgery
James E. Bland, M.D.
Martin L. Lazar, M.D.

Medical Neurology, Electroencephalography and Electromyography
Ralph G. Greenlee, Jr., M.D.
Allan L. Naarden, M.D.
Richard R. North, M.D.
William S. Woodfin, M.D.

Neuro-Ophthalmology and Electrodiagnosis of the Eye
Peter R. Bringewald, M.D.

7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676
8210 Walnut Hill Lane, Suite 900, Dallas, Texas 75231; 214 361-8100

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D., F.A.C.S.
E. FLOYD ROBINSON, M.D.
Neurological Surgery

2210 Maroneal, Houston, Texas 77025, 523-3684

FORT WORTH NEUROSURGICAL CLINIC
William R. Bernell, M.D.
George B. Crisp, Jr., M.D.
Charles L. Webster, Jr., M.D.

662 South Henderson, Fort Worth, Texas 76104
Telephone 338-9333; WATS Line 1-800-792-2278

"Every man owes some of his time to the upbuilding of his profession"

—Theodore Roosevelt

Take an active role in TMA and your county society.

Nuclear Medicine

NUCLEAR MEDICINE LABORATORIES OF TEXAS
Texas Medical Center
6411 South Main Street, Houston, Texas 77025

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology and Obstetrics-Gynecology

Herbert C. Allen, Jr., M.D., Director, 526-1501

HERBERT C. ALLEN, JR., M.D.
Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77025, 526-1501

Ophthalmology

HOUSTON EYE ASSOCIATES
1100 Hermann Prof. Bldg., Houston, Texas 77030, 713 790-1100

Richard S. Rulz, M.D., F.A.C.S.
Charles E. Russo, M.D., F.A.C.S.
Malcolm L. Mazow, M.D., F.A.C.S.
Robert H. Stewart, M.D., F.A.C.S.
Robert B. Wilkins, M.D., F.A.C.S.
Jeffrey D. Lanier, M.D., F.A.C.S
Michael A. Bloome, M.D., F.A.C.S.
Paul C. Salmonsen, M.D.
Richard L. Kimbrough, M.D.

DRS. ALPAR, TAYLOR, HOWELL, CURRIE & WEINBERGER
Ophthalmology

John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Hugh B. Currie, M.D.
Bruce L. Weinberger, M.D.
Diplomates of the American Board of Ophthalmology
15 Medical Drive, Amarillo, Texas

TEXAS RETINA ASSOCIATES
Albert Vaiser, M.D.
William B. Snyder, M.D.
William L. Hutton, M.D.
Diseases and Surgery of the Retina and Vitreous

318 Medical Arts Building, Dallas, Texas, 748-0958

BRUCE C. TAYLOR, M.D.
RICHARD L. WINSLOW, M.D.
Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E., Dallas, Texas 75204
214 521-1153

McPHERSON ASSOCIATES
Diseases and Surgery of the Retina and Vitreous
Alice R. McPherson, M.D.
Robert A. Moura, M.D.
Arthur W. Willis, M.D.
Durham Barnes, M.D.

6436 Fannin, Suite 800, Houston, Texas 77030
713 797-1903

EYE ASSOCIATES
Diseases and Surgery of the Eye
Charles A. Sargent, M.D.
Alan C. Baum, M.D.

3838 Hillcroft, #415, Houston, Texas 77027, 713 781-2882

CORPUS CHRISTI EYE ASSOCIATES

J. Gordon Bryson, M.D.
C. A. Struve, M.D.
John W. Lewis, M.D.

3166 Reid Drive, Corpus Christi, Texas 78404, Phone 853-7319

EYE CENTER OF AUSTIN

3913 Medical Parkway
Austin, Texas 78756; 512 451-8484

Edward J. Petrus, M.D.
Richard E. Nieman, M.D.

JOHN Y. HARPER, JR., M.D., P.A.

Diseases & Surgery of the Vitreous and Retina

601 Madison Square Medical Building
311 Camden Street, San Antonio, Texas 78212
(512) 226-1812

PETER R. BRINGEWALD, M.D.

Neuro-Ophthalmology

Texas Neurological Institute at Dallas, P.A.
7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214-661-7676

By appointment only.

Orthopedic Surgery

H. H. Beckering, M.D.
L. Ray Lawson, M.D.
George Truett James, M.D.
Robert D. Vandermeer, M.D.
Wynne M. Snoots, M.D.
R. Stephen Curtis, M.D.

W. B. CARRELL MEMORIAL CLINIC

A Professional Association
2828 Lemmon Ave., Dallas, Texas

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas

Louis J. Levy, M.D.
Henry C. McDonald, Jr., M.D.
Fred W. Sanders, M.D.
James M. Beckley, M.D.
Joseph H. Gaines, M.D.

Ralph E. Donnell, M.D.
F. Carlton Hodges, M.D.
J. Price Brock, Jr., M.D.

ORTHOPEDIC ASSOCIATES

Diplomates American Board of Orthopedic Surgery

1133 N. 19th St., Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC

Joseph Barnhart, M.D.
Donald T. Lazarz, M.D.
Lee C. Detenbeck, M.D.
Thomas S. Padgett, M.D.

5620 Greenbriar, Houston, Texas 77005, 526-6262 and
Parkway Towers Professional Building, 150 West Parker Road,
Houston, Texas 77022, 691-3905

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr., M.D.
Kenneth C. Scholz, M.D.
W. Ted Sisco, M.D.
G. S. Gill, M.D.

3702 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

ADDRESS CHANGE? Avoid missing or delayed mail. Send old and new address to Membership Department, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701.

THE ORTHOPEDIC GROUP OF RICHARDSON

Charles E. Graham, M.D.
M. Gayle Gildewell, M.D.

812 S. Central Expressway, Richardson, Texas 75080, 231-6396

Orthopedic Surgery

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr., M.D.
E. E. Rising, Jr., M.D.*
C. Poindexter, M.D.
C. R. Vavrin, M.D.
Diplomates American Board of Orthopaedic Surgery
*Emphasizing Surgery of the Hand
Frank R. Vincenti, M.D.

801 West Randol Mill Road, Arlington, Texas 76012, 817 261-8284

BOSWELL-EVANS ORTHOPAEDIC CLINIC

4849 West Lawther Drive
Dallas, Texas 75214

George M. Boswell, Jr., M.D., F.A.C.S.
Practice Limited to Consultation and Surgery

James P. Evans, M.D.
Practice Limited to Sports Medicine

LOUIS W. BRECK, M.D., P.A., F.A.C.S.

Diplomate American Board of Orthopaedic Surgery
Practice Limited to Orthopaedic Surgery

1300 N. Stanton Street, El Paso 79902
Telephone 915 544-3831

SPORTS MEDICINE CLINIC OF NORTH TEXAS

4849 W. Lawther Dr., Suite 101
Dallas, Texas 75214

James Pat Evans, M.D.

THURSTON DEAN, M.D.

Diplomate American Board of Orthopedic Surgery

509 N. Garfield Street
Midland, Texas 79701
Telephone: 915 682-0433 or 682-0163

Otolaryngology

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.

Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

Otology

DANIEL McNAMARA MARTINEZ, M.D., F.A.C.S.

Otology and Otoneurology

8210 Walnut Hill Lane, Presbyterian Professional Building,
Suite 400, Dallas, Texas 75231; 214 691-7331

DALLAS HEARING, BALANCE AND OCULAR PULSE LABORATORY

Audiology—Vestibulometry—Non-invasive Carotid and Vertebral Circulation Studies

402 Presbyterian Professional Building, 8210 Walnut Hill Lane,
Dallas, Texas 75231; 214 691-7367

Pathology

FORT WORTH MEDICAL LABORATORIES
John J. Andujar, M.D.
Dorothy Patras, M.D.

1400 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

BROWN & ASSOCIATES MEDICAL LABORATORIES
Clinical Pathology, Hematology, Surgical Pathology, Exfoliative Cytology and Electrophoresis

Wilson G. Brown, M.D.
George V. Miller, M.D.
Walter G. Olin, Jr., M.D.
John R. Thomas, M.D.
S. Joseph Skinner, M.D.
Joe B. Haden, M.D.
Enrique van Santen, M.D.
Elaine V. Shalek, M.D.
Robert H. McNeely, M.D.
Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas 77030
220 Park Plaza Prof. Bldg., Houston, Texas 77004
Telephone 527-5230
Mailing Containers on Request — Office Pickup Service in Houston

PRUITT MEDICAL LABORATORIES
Jack Pruitt, M.D.
E. Hernandez, M.D.
Diplomates, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation
P. O. Box 160, Lufkin, Texas 75901, 634-4451

WACO CLINICAL PATHOLOGY LABORATORY
K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Robert Wayne Walter, M.D., F.A.C.P.
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation
Mailing Containers on Request
2112 Washington Ave., P.O. Box 3160, Waco, Texas 76707, 756-7226

J. S. Wilkenfeld, M.D., Medical Laboratories, Inc.
J. S. WILKENFELD, M.D. ENA E. MOCEGA, M.D.
Diplomates of the American Board of Pathology
Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology
8850 Long Point Road, P.O. Box 55008
Houston, Texas 77055, 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

ARTHUR L. RAINES, M.D. AND ASSOCIATES
Pathologists
DIPLOMATES, AMERICAN BOARD OF PATHOLOGY
Clinical Pathology — Surgical Pathology
Exfoliative Cytology — Medicolegal Consultation
Hospital and Clinic Laboratory Consultation
P. O. Box 118, Cleburne, Texas 76031
817 645-9181, Ext. 360
MAILING CONTAINERS ON REQUEST

HENRY B. OWENS, M.D., F.C.A.P.
Diplomate American Board of Pathology
Cytology and Tissue Pathology Only

801 E. Border St., Suite M, P. O. Box 1627
Arlington, Texas 76010, (817) 461-2771

Mailing Containers on Request—Office Pickup Service in Arlington

Physical Medicine & Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES WARM SPRINGS FOUNDATION, INC.
P. O. BOX 58, GONZALES, TEXAS 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade
WILLIAM E. HISEY, Administrator
LARRY E. BROWNE, M.D., Medical Director

ROBERTO G. ROLFINI, M.D.
Diplomate American Board of Physical Medicine & Rehabilitation
Rehabilitation Medicine and Electromyography

702 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205, Telephone 226-2424

WILLIAM T. BLESSUM, M.D.
Physical Medicine, Rehabilitation, & Electromyography

7342 Oak Manor, Suite 125

San Antonio, Texas 78229; Telephone (512) 349-6573

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D., F.A.C.S.
THOMAS M. BIGGS, M.D., F.A.C.S.
LAURENCE E. WOLF, M.D.
Diplomates American Board of Plastic Surgery

PLASTIC SURGERY
5419 Carolline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery

530 Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Cosmetic Surgery

612 Doctors Bldg., Fort Worth, Texas 336-0356

PLASTIC SURGERY ASSOCIATES
Simon Fredricks, M.D., F.A.C.S.
Charles W. Bailey, Jr., M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery

Jonathan J. Dora, M.D.

1103 Medical Towers, Houston, Texas 77025, 523-5575

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
Plastic & Reconstructive Surgery
Cosmetic Surgery

606 Medical Plaza Bldg., 800 Eighth Avenue, Fort Worth, Texas 76104, 335-4751

CARL R. COERS, III, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive & Hand Surgery

606 Medical Plaza Bldg., 800 Eighth Avenue, Fort Worth, Texas 76104, 335-4751

VALENTIN GRACIA, M.D., P.A., F.A.C.S., F.I.C.S., D.A.B.
Aesthetic Surgery—Burns

1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

TMA International Travel Program
. . . Another service of your association

FRANCIS A. MORRIS, JR., M.D.
Diplomate American Board of Plastic Surgery
Plastic Surgery

3100 Red River, Austin, Texas 78705; 512-476-9149

PATRICK H. BECKHAM, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1111 West 34th Street, Suite 207, Austin, Texas 78705, 459-3258

WILLIAM E. BARNES, M.D.
Diplomate American Board of Plastic Surgery
Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 608, Austin, Texas, 454-7659

JOHN E. CARTER, M.D., P.A.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery

7711 Louis Pasteur Drive, San Antonio, Texas 78229
Telephone: (Area Code 512) Office 696-2390 Medical Exchange 227-6331

JOSEPH C. FORD, M.D., P.A., F.A.C.S.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery

508 Madison Square Medical Building
311 Camden, San Antonio, Texas 78215, 224-5509

BROMLEY S. FREEMAN, M.D., F.A.C.S.
D. ROBERT WIEMER, M.D.
Diplomates American Board of Plastic Surgery
Plastic & Reconstructive Surgery

7000 Fannin, Suite 1770, Houston, Texas 77025
713 795-5584

JACK L. CONLEE, M.D.
Diplomate American Board of Plastic Surgery
Plastic and Cosmetic Surgery

3318 S. Alameda, Suite 1, Corpus Christi, Texas, 855-7359

PLASTIC SURGERY ASSOCIATION
LEONARD KOCH, M.D.
Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410, 806 792-2313

ROBERT L. CLEMENT, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive Surgery

1111 West 34th Street, Suite 205, Austin, Texas 78705, 512 459-3101

STEPHEN C. LESAUVAGE, M.D.
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1318 Clinic Drive, Tyler, Texas 75701; 214 593-8296

Psychiatry

Perry C. Talkington, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Larry R. Kimsey, M.D.
Charles M. Smith, M.D.
Gregory G. Dimijian, M.D.
Linda R. Hughes, M.D.
Roy H. Fanoni, M.D.
Byron Howard, M.D.
Larrie W. Arnold, M.D.
Madeline W. Harford, M.D.
John G. Looney, M.D.

practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

FABRE CLINIC

LOUIS F. FABRE, JR., M.D., Ph.D.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy
Children — Family — Alcoholism

Free of charge to patient MEDICATION CLINIC
FOR PATIENTS WITH ANXIETY OR DEPRESSION
IN CONJUNCTION WITH CNS RESEARCH WITH
PSYCHOPHARMACOLOGICAL COMPOUNDS

DAVID McLENDON, Ph.D.
Licensed Clinical Psychologist
Individual and Group Psychotherapy
Diagnostic Evaluations and Counseling

H. JOHN JACKSON, Ed.D.
Educational Psychologist
Administrative Consultation to School Districts
Program Organization Consultation
Individual Family Counseling

5503 Crawford Street, Houston, Texas 77004 713 526-2328

ALAN B. BRINSMADE, M.D.
General Psychiatry
Specializing in Psychotic Illnesses-Acute and Chronic

Hermann Medical Center Professional Building
Houston, Texas 77025, 713 524-8496

PERRY C. TALKINGTON, M.D.
Psychiatry

4645 Samuell Blvd., Dallas, Texas 75228, 214 381-3849

CHARLES B. COVERT, M.D.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy

San Felipe Green Professional Building, Suite 314
1900 Yorktown, Houston, Texas 77056; 713-627-9988

TMA Automobile Lease Program
. . . Another service of your association

Psychiatry & Neurology

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., J. J. Leyva, M.D.

Department of Psychology
Allen Goss, Ph.D., Jim M. Phillips, Ph.D.
Practice Limited to Neurology and Psychiatry
Office Hours By Appointment

First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

STEPHEN WEISZ, M.D.
Practice Limited to Neurology and Psychiatry

1637 Medical Arts Bldg., Dallas, Texas 747-5183

HAUSER CLINIC
Psychiatry, Neurology, Electroencephalography and Electromyography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
*H. James Stuart, M.D.
Javier A. Zapata, M.D.
*Susan B. Darsey, M.D.
*Harvey A. Rosenstock, M.D.

Section of Psychology
Ken R. Vincent, Ed.D.

Administrator
Richard J. Kurzenberger

Section of Neurology
*Gerald Ratinov, M.D.
*Robert M. Gordon, M.D.
*Ronald DeVere, M.D.

Section of Social Work
Pamela Plimmer, A.C.S.W.
Marguerite Papademitriou, A.C.S.W.
Margery Engel, M.S.S.W.
Jean Lerner, M.S.W.

808 Memorial Professional Building, Houston, Texas 77002
Telephone 713-224-5041

*Diplomate, American Board of Psychiatry and Neurology

THE FORT WORTH NEUROPSYCHIATRIC CENTER
*Herbert G. Rush, M.D.
A. Arauzo, M.D.
Sanford Lehrer, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

*Diplomate American Board of Psychiatry and Neurology

H. KORNBLIT, M.D.
Neurology—Headache Clinic

Memorial City Prof. Bldg. #176
902 Frostwood, Houston, Texas 77024

Radiology

ROYAL WERTZ, M.D., F.A.C.R.
Practice Limited to Radiology

800 Rusk Street, Amarillo, Texas 79106, 373-8324

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D., D.A.B.R.

RADIOLOGY
109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

Rheumatology

DON E. CHEATUM, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Rheumatology
Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204, 823-4151

RHEUMATOLOGY
Roy M. Fleischmann, M.D.
Diplomate American Board of Internal Medicine
Rheumatology Consultation of Physician Referral

3707 Gaston Avenue, Suite 810, Dallas, Texas 75246; 827-0868

Thoracic Surgery

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.
Maruf A. Razzuk, M.D.

DRS. PAULSON, URSCHEL, RAZZUK AND ASSOCIATES
Thoracic and Cardiovascular Surgery

1201 Barnett Tower
3600 Gaston Avenue, Dallas, Texas 75246, 824-2503

JOHN L. KEE, JR., M.D.
Thoracic Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246, 826-5184

ALLAN L. GRAHAM, M.D., F.A.C.S.
KARAMAT U. CHOUDHRY, M.D., F.A.C.S.
Diplomates American Board of Surgery and Board of Thoracic Surgery
ROBERT W. MILEY, M.D.
Diplomate American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
800 Eighth Ave., Suite 626, Fort Worth, Texas 76104, 332-7878

Thoracic Surgery Associates
ROBERT E. CARR, M.D., F.A.C.S.
ROBERT N. McGEHEE, M.D.
Thoracic and Cardiovascular Surgery
Diplomates American Boards of Surgery and Thoracic Surgery

532 Medical Plaza, 800 Eighth Ave., Ft. Worth, Texas 76104, 332-2720

HECTOR O. YANES, M.D., P.A., F.A.C.S., F.A.C.C.
Cardiac, Vascular and Thoracic Surgery

Diplomate American Board of Surgery and
American Board of Thoracic Surgery

432 Medical Plaza, 800 Eighth Ave.,
Fort Worth, Texas 76104 332-1947

RICHARD E. WOOD, M.D.
Cardiac, Thoracic and Vascular Surgery

Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890

Hours By Appointment

Make your plans now to attend the
TMA Conference on Legislation
January 15, 1977, Austin

Urology

JO C. ALEXANDER, M.D., FOSTER FUQUA, M.D.,
ELGIN W. WARE, JR., M.D., GEORGE E. HURT, JR., M.D.,
DONALD E. JOHNSON, M.D. & ASSOCIATES
L. MICHAEL GOLDSTEIN, M.D., THOMAS P. REILLY, M.D.

Urology

3600 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109

Dolphus E. Compere, M.D., F.A.C.S.
Grant F. Begley, M.D., F.A.C.S.
Hugh Lamensdorf, M.D., F.A.C.S.

Diplomates of American Board of Urology

H. M. GIBSON, JR., M.D., F.A.C.S.
ABEL GARDUNO, M.D.
Certified by American Board of Urology
Practice Limited to Urology

512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephone 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
NEWTON F. McDONALD, M.D.
JAMES E. MORNEAU, M.D.
Practice Limited to Urology

1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

DONALD J. NEESE, M.D.
H. R. WAGNER, M.D.
Practice Limited to Urology

218 Hermann Professional Building
Houston, Texas 77025, Telephone: 713 521-9538
400 Medical Center Blvd., Suite 207
Webster, Texas 77598, Telephone: 713 332-2466

EUGENE R. TODD, M.D., P.A.

Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3434 Swiss Ave., Suite 406, Dallas, Tex. 75204, 214 826-3500

DALLAS UROLOGY ASSOCIATES

David D. Reisman, M.D.
Donald J. Logan, M.D.
Allen S. Plotkin, M.D.
Donald L. McKay, M.D.

Practice Limited to Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

DIRECTORY RATES & DATA: Space is available to TMA members at $12.50 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. Section headings are limited to those specialties designated by the American Medical Association. A list of these specialties is available upon request. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

No one wakes up thinking, "Today I'm going to abuse my child."

Abuse is not something we think about, it's something we do.

Last year in America, an estimated one million children suffered from abuse and neglect, and at least 2,000 of them died needless, painful deaths.

The fact is, child abuse is a major epidemic in this country.

The solution? Part of it lies in your hands. With enough volunteers, local child abuse prevention programs could be formed to aid parents and children in their own communities. With your help, eighty percent of all abusers could be helped. Please. Write for more information on child abuse and what you can do.

What will you do today that's more important?

A Public Service of This Magazine & The Advertising Council

We need your help. Write:

National Committee for Prevention of Child Abuse, Box 2866, Chicago, Illinois 60690

TEXAS —
TWO IMMEDIATE POSITIONS

BOARD CERTIFIED OR ELIGIBLE INTERNIST . . .

$45,000 net practice guarantee first year; second year partnrship option or solo in area if preferred. Inclusive Malpractice; office space; office equipment; nursing personnel; full fringes. 90 acre Medical Complex with 379 bed full service hospital (physician management); superior general services; excellent specialty services and facilities; separate Psychiatric Annex.

Situated in Pasadena, Texas, adjacent to Houston. Located near NASA — a few miles east of Texas Medical Center. Population 126,000. Metropolitan Houston population 2,509,000. High per capita income area. Excellent schools (from elementary to doctorate in 25 mile range); 2 major universities and 2 medical schools easily accessible; fine churches with a friendly area population; complete cultural and social opportunities; fresh and salt water; Astrodome, major league sports (football, baseball, ice hockey, golf tournaments, tennis tournaments).

Submit resume: INTERNIST; P. O. Box 3093, Pasadena, Texas 77501; or call 713-943-2500.

EMERGENCY PHYSICIANS

Career oriented emergency physicians with additional post graduate training and/or emergency medicine experience. Continuing educational requirements mandatory. Teaching and non-teaching emergency departments available. The only emergency medicine group staffing emergency department-Texas Medical Center. Board eligibility or certification with interest in trauma qualifies for director status. Gulf Coast area. Immediate openings.

Guarantee $52,000 - $58,000.

Fringes: Malpractice, major medical, life, disability income.

Houston metropolitan facilities. Excellent schools, churches with a friendly area population. Cultural and educational opportunities. Fresh and salt water. Astrodome, major league sports (football, baseball, ice hockey, golf tournaments, tennis tournaments).

Only Qualified Need Apply

Call or Send C.V.: Gulf Coast
Emergency Physicians,
(713) 943-1918, 3325 Plainview, Suite 7
Pasadena, Texas 77504

TEXAS MEDICAL ASSOCIATION
110th Annual Session • May 12-14,1977
EXHIBITS WANTED
SCIENTIFIC and TECHNICAL
For information and applications write or call:
Dale R. Werner, 1801 N. Lamar Blvd., Austin, Texas 78701
512/477-6704
Shamrock Hilton Hotel - Houston, Texas

Classified Advertising

Physicians Wanted

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from the big city problems. Call collect Dr. David M. Pogue at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6388.

PSYCHIATRIST, board certified or eligible needed for modern forensic psychiatry program. Texas license required. Salary $34,000+. Immediate openings. Call or write: Robert B. Sheldon, M.D., Superintendent, Rusk State Hospital, P. O. Box 318, Rusk, Texas 75785; 214-683-5481.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL INTERNIST WANTED: Board certified or eligible to join expanding successful group. Busy hospital and office practice. Houston environs. Excellent salary and fringe benefits. Contact Doctors Clinic, 1501 Broadway, Galveston, Texas; attention Robert Walsh, Administrator.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic; adjacent to 36 bed hospital, recently remodeled. Salary $40-48,000 per year. Partnership available after trial period. Contact Willis G. Youens, Jr., M.D., 105 N. Grohmann, Weimar, Texas 78962; 713-725-8545.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

EMERGENCY DEPARTMENT GROUP, HOUSTON AREA, EXPANDING—choice of salary or fee-for-service with guarantee—malpractice paid—Call 713-861-7942 or write Greater Houston Emergency Physicians Association, 625 West 19th, Houston, Texas 77008.

PUBLIC HEALTH PHYSICIAN with Austin-Travis County Health Department in Austin, Texas. Clinical experience required. Public health background preferable but not required. Starting pay approximately $30,000, plus fringe benefits. Regular hours, 40 hours per week. Must have valid license to practice medicine in State of Texas. Contact Dr. Meisenbach, Austin-Travis County Health Department, 1313 Sabine, Austin, Texas 78701; telephone 512-474-6581.

WANTED: GP OR FP. Potentially, lucrative practice, suburban area of about 20,000. Willing to negotiate. Paul A. Grandy, M.D., North Lamar Medical Clinic, 10805 North Lamar Blvd., Austin, Texas 78753; 512-837-2640.

PSYCHIATRIST BOARD CERTIFIED OR ELIGIBLE. $36,000 to $40,000. Texas license required. Building a better and more dynamic program in State Hospital. Ideal family living town of 30,000, good schools, recreation, mild weather. Maurice A. Watts, M.D., Clinical Director, Big Spring State Hospital, Box 231, Big Spring, Texas, 79720; 915-267-8216.

PSYCHIATRIC RESIDENCY in approved three-year program. Effective connections with universities, medical schools, private clinics and community centers. Outstanding faculty and programs. Stipends with Texas license are $15,000, $16,000 and $17,000 per year. In addition, now offering residency in child psychiatry. For full information, write to Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

CHILD PSYCHIATRY RESIDENCY may be taken before or after adult psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psychopharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed in-patient unit for children. Liaison with graduate schools, medical school and community programs. Stipends: First year, $15,000; second year, $16,000; third year, $17,000; fourth year, $18,000. Contact Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

WANTED: BOARD CERTIFIED OR ELIGIBLE OBSTETRICIAN-GYNECOLOGIST to join multispecialty clinic in Houston. Starting salary competitive, early partnership available. Contact Business Manager, Glen Valley Clinic, 7640 Bellfort, Houston, Texas 77061; 644-3344.

INTERNIST—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

PEDIATRICS—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

FAMILY PRACTICE—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas 512-672-2811.

FAMILY PRACTITIONER WANTED to join two established family practitioners in Trinity, Texas. Former partner is leaving November 1976 for residency. A large ready made practice is available now. You are invited to investigate clinic and hospital facility, compatibility, economic and environment of rural practice in an outstanding recreational area that includes 2,000,000 acres of East Texas forest, 90,000 acre Lake Livingston, various golf courses, marinas, and country club developments. All guarantees, etc. are negotiable. Bring your wife. Sam R. Barnes, M.D. and J. Richard Cook, M.D., P.O. Box 672, Trinity, Texas 75862.

FAMILY PRACTITIONER WANTED TO ASSOCIATE with well established solo practitioner to handle patient overflow. Alternate weekend coverage, etc. Space available, reasonable. X-ray and full lab in building. Desire experienced FP with holistic approach. No hospital practice necessary. Please reply to Ad-652, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTICE, GENERAL PRACTICE—Wanted immediately to join physician staff in rural community one-hour from Dallas-Fort Worth area. Extremely active practice with good benefits and an opportunity to enter into the corporation. Practice is with physicians clinic, 26-bed hospital, and 42-bed nursing home within the same building complex. Excellent arrangement for family practice. For further information contact Roger E. Marks, M.D., 817-897-2215 or 817-897-4436; Glen Rose, Texas.

FAMILY PRACTITIONER FOR MULTISPECIALTY CLINIC in Houston's fastest growing Southwest area. Salary guarantee and early partnership. Excellent radiographic and diagnostic facilities in new clinic building adjacent to hospital. Contact Pierre Gendron, 6630 DeMoss, Houston, Texas 77074.

BOARD CERTIFIED AND/OR BOARD ELIGIBLE INTERNISTS: Board certified and/or board eligible internists sought for Chief and Deputy Chief, Department of Medicine, U.S. Public Health Service Hospital, Galveston, Texas and other areas of Gulf Coast. Affiliated with University of Texas Medical Branch in terms of medical student, intern and resident teaching. Employment in PHS Commissioned Corps, if eligible, or under Federal Civil Service System with liberal benefits and adherence to equal employment practices. For information call or write Thomas Shinnick, M.D., Director, U.S.P.H.S. Hospital, 4400 Avenue N, Galveston, Texas 77550; 713-763-1211.

GENERAL PRACTICE—SOLO PRACTICE: Rural area, progressive community, friendly people, excellent school system. Modern 30 bed hospital. One other doctor on active medical staff. Rent free office space. Good hunting and fishing. Contact Administrator, Throckmorton County Memorial Hospital, P.O. Box 487, Throckmorton, Texas 76083; 817-849-2151 or 817-345-3206, Dr. Luis A. Barranco.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $10.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

EMERGENCY MEDICINE GROUP PRACTICE in Texas. Salary $44,000 with many fringe benefits. Send resume to Houston E.P.A., 8700 Commerce Park Drive, Suite 121, Houston, Texas 77036.

DALLAS AREA OPPORTUNITIES: Outstanding private practice opportunities exist for general internists and family practitioners in the suburban community of Plano, Texas. Plano's population has increased from 17,000 to over 46,000 in the last six years. Excellent schools, new 193 bed hospital, physician offices across the street. Be a part of this dynamically growing community. For further details call collect or write to: John C. Daniels, Director, Professional Relations, Plano General Hospital, 3901 West 15th Street, Plano, Texas 75075; 214-423-6800.

WANTED: INTERNIST TO JOIN busy solo internist in new office. Complete clinical laboratory facilities plus x-ray. City of 25,000 population in Northeast Texas. Drawing area of 100,000. Two new hospitals. High caliber medical community. Excellent recreational facilities; good schools and churches. Ideal family city. Please reply to Ad-625, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EXCELLENT OPPORTUNITY FOR ONE OR TWO FPs. North Central Texas, small town, large lake. Large cities nearby. Exceptional recreation on doorstep. Clinic adjacent to new hospital. New schools, churches, homes. On-call time with three others. Solo or group. Salary guarantee. Growing area. Help needed badly. Please reply to Ad-663, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN WANTED: FAMILY CARE AND CHRONIC. Hospital facilities available ten miles. Clinic space available downtown Kemp. Pharmacy available. 45 miles southeast Dallas. Close to Cedar Creek Lake, fastest growing recreational-retirement area in Texas. Projected 100,000 population by 1980 in area. Country club, golf course, three miles. Excellent opportunity. Please reply to Edmund Horton, Ph., P.O. Box 449, Kemp, Texas 75143; phone 214-498-2011.

WANTED: LOCUM TENENS for 6 months to 18 months to help me in a busy general practice. Modern clinic, new 80 bed hospital. Present associate leaving Jan. 1st. Contact: M. A. Treadwell, M.D., Eastland, Texas; 817-629-2633.

GENERAL PRACTITIONER WANTED—Growing hospital in progressive East Texas town near metroplex needs an ambitious general practitioner to join staff. Community and hospital very cooperative in helping to establish your practice. Call (214) 845-2281, or write to Milton Bolgiano or Paul Bennett, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75647.

STAFF PHYSICIAN NEEDED FOR STATE HOSPITAL. Progressive 750 resident state institution. Eligibility for Texas licenses required. 40 hour work week, paid vacation, sick leave, holidays, good retirement plan, free group insurance. Kerrville is known as a retirement center. Prefer mature physician over age 50. Please contact Luther W. Ross, M.D., Superintendent, Kerrville State Hospital, P.O. Box 1468, Kerrville, Texas 78028 or phone 512-896-2211. We are an equal opportunity employer.

EXCELLENT OPPORTUNITY FOR YOU—MD, GP OR FP to replace physician who has moved. New 38 bed hospital, basic surgery, gyn, OB necessary. To associate with physician with quite a few years practice. Excellent character reference absolutely necessary. Contact T. R. Wilson, M.D., P.O. Box 47, Groesbeck, Texas 76642.

NEUROLOGIST: To work in conjunction with busy neurosurgeon associated with a growing regional medical center serving North Texas and Southern Oklahoma. Must be board certified or eligible and experienced in EEG and EMG. A variety of practice arrangements are available. Call Otmar W. Albrand, M.D., Denison, Texas, 214-465-6111 or 214-463-1693.

MEDICAL DIRECTOR: Rio Grande State Center for MHMR. Planning, administrating, and supervising treatment care programs. Texas licensable. Salary $39,900, fringe benefits, liability protection under Texas law. Alvaro Samaniego, M.D., Clinical Director, Rio Grande State Center for MHMR, P.O. Box 2668, Harlingen, Texas 78550; 512-423-5077. EOE.

WANTED: INTERNISTS, GENERAL OR WITH SUBSPECIALTIES in oncology and hematology or gastroenterology to practice with a sixteen member multispecialty association in East Texas. New building, nuclear medicine, linear accelerator therapy unit. Travis Clinic, P.O. Box 870, Jacksonville, Texas 75766, or call 214-586-2505.

WANTED: FAMILY PRACTITIONER TO JOIN three man group. East Central Texas. New joint commission approved 30 bed hospital. Airport. New junior-senior high complex. Railroad division point. Small industry. Primary income ranching. Three fishing lakes. Deer, quail, dove hunting. Country club. No initial investment necessary. Contact Drs. Gage, Cox or Halbert, 315 Main Street, Teague, Texas 75860, 817-739-2561.

WANTED: PSYCHIATRIST/NEUROLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

OPPORTUNITY FOR OPHTHALMOLOGIST AND OTOLARYNGOLOGIST in Central Texas. Trade territory of 75,000-100,000. Only one ophthalmologist and no otolaryngologist following retirement of physician doing EENT. New hospital with 160 beds and all modern equipment. The need is great and the opportunity is unlimited. Contact Braswell Locker, M.D., Route 3, Box 184, Brownwood, Texas 76801.

FP, PED, INT NEEDED for 18 member group in Dallas area. 100 bed fully accredited hospital. Minimum $2500 month guarantee plus bonus. Benefits include profit sharing, pension plan, good vacation plan, malpractice insurance, time off for post graduate training. Contact: North Texas Clinic Association, 3330 S. Lancaster Road, Dallas, Texas 75216.

HALF-TIME-20 HOURS A WEEK MEDICAL ADVISOR, Austin Independent School District. Primary responsibility for providing medical consultation. Most of time spent in the schools providing selected medical services for school health program. Salary $15,000 to $18,000 depending on experience and whether or not board certified. Mileage reimbursement—innovative program. Contact Dr. H. L. Gaines, 6100 Guadalupe Street, Austin, Texas 78752.

TEXAS. IMMEDIATE OPENINGS for full time ER physicians in several Texas locations. Flexible shifts. Competitive remuneration. Contact: R. Murchison, M.D., The Registry, Suite 282, 6350 LBJ Freeway, Dallas, Texas 75240. 214-233-9088.

GENERAL SURGEON. Certified or board eligible with genuine spirit for practice in a multispecialty clinic, unparalleled professional potential. If you feel qualified and interested in the future, reply in detail to: Ad-676, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN WANTED: Three associated board certified pediatricians with 20 year practice. Position open July 1977 when one associate leaves to pursue different specialty. Office in Northeast Dallas, choice Dallas, Richardson, Highland Park schools. Large patient drawing area. Middle to high middle class income patients. 300 bed hospital two blocks away. Ad-677, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

NEED FULL TIME MEDICAL DIRECTOR and full time center physician and part-time center physician at medical facility of Gary Job Corps Center in resort community of San Marcos, Texas. Essentially, involvement is 8 a.m. to 5 p.m., Monday through Friday and on call alternating nights and weekends. Attractive salary with fringe benefits including three bedroom house for each physician. Contact Mr. Alfred Perkins, Center Director, 512-396-6652 for appointment and/or further information.

INTERNIST with training in allergy. Nothing to buy except office equipment. $200,000 net annual income. Retiring from practice July 1, 1977. V. E. Friedewald, M.D., F.A.C.P., 2203 West Tennessee, Midland, Texas; 915-682-5385.

SMU SEEKS STUDENT HEALTH PHYSICIAN to provide primary medical care for student population of 10,000. Excellent working conditions and fringe benefits, malpractice insurance provided. Write or call Dr. Dave Tobolowsky, SMU, Box 195, Dallas, Texas 75275, or phone 214-692-2141.

FAMILY PRACTICE in a trade area of 18,000. New 42 bed hospital. Office space for lease or purchase. Good diversified economy. Excellent hunting. Contact Harold L. Boening, Administrator, Karnes County Hospital District, Box 450, Kenedy, Texas 78119; 512-583-3401.

PLEASE, CONSIDER FREER, TEXAS as your home and practice area. Small (28 bed) privately owned hospital forced to close December 1, 1976, due to need for physician. One doctor in community who has more practice than able to carry. The city is growing and the oil fields and ranches are booming. Please, come and settle in this city. We want you, we need you and we welcome you. You will not be disappointed. We do not put our best foot forward but after a few weeks you will not want to leave us. Contact Ad-680, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIANS NEEDED IN GROVETON, TEXAS. Located 100 miles north of Houston and 187 miles south of Dallas. Located in the heart of Davy Crockett National Forest in East Texas. Only minutes from Lake Livingston, golf course, and county airport. Excellent school system. Three colleges within driving distance. Modern hospital and nursing home. Clinic space with three complete examining rooms available. Contact: Randall L. Archer, Jr., P.O. Box 815, Groveton, Texas 75845; 713-642-1221.

Situations Wanted

GENERAL SURGEON (Board certified, DABS), bilingual (Spanish and English). Texas license. Seeks association, partnership, group or hospital. Prefer South Texas. Contact Dr. Domingo Galliano, 720 West 170 St., New York, New York 10032.

GENERAL AND TUMOR SURGEON, FECS(C), FACS. Age 47. Extensive training and experience in head and neck and general oncology. Currently in high volume practice in Academic Centre in Canada. Wishes to relocate in Texas or Southeast. Academic setting not essential. Please reply to Ad-671, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN'S ASSISTANT: National board certified physician's assistant, Texas graduate, AMA accredited program. Employed one year in family practice residency program. Seven years prior experience in health associated fields. Desire position in family practice, general surgery, or internal medicine situation. Resume, curriculum vitae available. Walter Moss, 6912 Heritage, Fort Worth, Texas 76134; 817-293-7252.

SEEKING LOCATION: UROLOGIST, 36, Flex. Completing training in June 1977. Desires group, associate or solo practice. All areas considered. Available in July 1977. Please reply to Ad-673, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

CHIEF RESIDENT - MAJOR UNIVERSITY TRAINING PROGRAM would like to enter partnership or group practice in or near large community or city. Prefer coastal area. Willing to work. Please contact Ad-679, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

DERMATOLOGIST: Board certified, 10 years successful solo practice in one location. Wishes to relocate in larger city or metropolitan area either group or solo practice. Please reply to Ad-681, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

AUSTIN—NEW PROFESSIONAL PARK. Internist, GP, FP, Peds, OB/GYN sought to associate in group setting for solo practice. Physician population has not kept pace with accelerated growth. University town, new hospital. Call or write: Cannon Professional Park c/o 3913 Medical Parkway, Austin, Texas 78756. Telephone 512-451-8489.

NEW ULTRA-MODERN, cedar and glass office space for lease in Northwest San Antonio, one block from loop 410 and one exit from IH 10. Across the road from Park North Hospital, the building is divided into six separate office spaces, four of which are occupied by 4 general dentists, one orthodontist, and three oral surgeons. Up to 4700 sq. ft. available at 60c sq. ft. with a very liberal allowance to finish out to your specifications. Ideal situation for the family practitioner or pediatrician. Contact Mossrock Venture, 2803 Mossrock, Suite 201, San Antonio, Texas 78230.

USED Picker Radiographic and Fluoroscopic x-ray unit complete with a 500 MA single phase generator, 9 inch Image Intensifier, TV, and a linear tomography attachment. Used M-4 Kodak automatic film processor. If interested contact Chairman, Radiology Department, Malone-Hogan Clinic, 1501 W. 11th Place, Big Spring, Texas 79720; phone 915-263-1211, ext. 194.

FOR SALE: TWO DOCTOR CLINIC with separate home, swimming pool and race horse breeding set up on beautiful acreage. Barns and pastures could be converted to registered cattle breeding. Located two miles from hospital and medical mall. Out of city limits; no zoning. Owner retiring, will finance to right party. Please reply to Ad-678, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OPHTHALMOLOGY EQUIPMENT. Two chairs, one treatment, one refracting with Green's refractor and Copeland streak retinascope. Cabinets, display rack and desks. Contact Joe Gallagher, M.D., 401 Rose Marie, Hearne, Texas 77859; 713-279-3672 weekends. Apt. 136, Western Hills Village, Temple, Texas 76501; 817-778-5661 weekdays.

FOR SALE: Due to death of doctor, large established family practice of Dr. J. Edwards Prewett grossing over $100,000 annually. Knowledge of Spanish helpful. FOR LEASE: Long-term lease on clinic building, 2404 South IH 35. Equipment available. Approximately 2,700 sq. ft. including separate dentist's office under lease. Scenic outdoor patio, rock garden, large beautiful trees, plenty parking. Write Mrs. J. Edwards Prewett, 407 Almarion, Austin 78746; or call residence 512-327-0662 or doctors office 512-444-5501.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

Ben H. Quinney, M.D.

Announces The CONVERSION Of His Office

For The Practice Of

Hematology And Medical Oncology

To Consultation Only

865 Margaret Place

Shreveport, Louisiana 71101

By Appointment Only

Telephone
Office (318) 222-1006

THE MALPRACTICE CRISIS

MANY MAJOR COMPANIES HAVE QUIT OR WILL SOON QUIT WRITING PROFESSIONAL LIABILITY INSURANCE. IF YOU CANNOT SECURE, OR CANNOT RENEW YOUR COVERAGE, CONTACT JOE NIGRELLE, 512 - 341-2564.

Suite 518 - GPM Building - North Tower
800 N.W. Loop 410
SAN ANTONIO, TEXAS 78212
AC 512 - 341-2564

JOE NIGRELLE INSURANCE AGENCY

1007 West 31st Street, Austin, Texas 78705
AC 512 452-0189 Kirke Jeffrey

Professional Liability • Office Liability • Physician Equipment Floaters • Fire and Homeowners • Automobile • Farm Insurance • Life, Accident and Sickness, Disability Income • Malpractice Insurance.

Advertising Directory

Beltone Electronics	17
Beverly Hills Hospital	117
Brown Schools	134
Burroughs Wellcome Co.	20
Chaparrosa Agri-Service	35
Comatic Laboratories, Inc.	3rd Cover
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
Gentec Hospital Supply Co.	23
Intrav Travel Adventure	31
Kelsey-Seybold Clinic	74
Lederle Laboratories	5
Eli Lilly and Company	36
Medical Arts Clinic of Corsicana	134
The Medical Protective Company	74
Merck Sharp & Dohme	67-68
Multiphasic Medical Management, Inc.	128
Joe Nigrelle Insurance Agency	131
Pasadena Bayshore Hospital	4
Pennwalt Corp.	70-71
The Pharmaceutical Manufacturers Association	72-73
The Prudential Insurance Company of America	9
Ben H. Quinney, M.D.	131
Roche Laboratories	1-2, 18, 135
Schick Hospital	110
Scott and White Clinic	Back Cover
Smith Kline & French	19
Starlite Village Hospital	35
Texas Bank and Trust Company	35
Texas Medical Association	
Annual Session	105-108
Automobile Leasing Program	14
Memorial Library Fund	109
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchins, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	134
Warner-Chilcott	98-99
Wichita Falls Clinic	35
Physicians' Directory	118-127
Classified Advertising	129-131

Publication of an advertisement in *Texas Medicine* is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

Letters

Texas Nurses and Texas Doctors

Dear Ms. Baker:

There have been some changes in the past few decades in the healing art, and we must keep our thinking up to date.

Three decades ago there was a rapid turnover in the nursing profession: Pay was less than $1 an hour; the practice of medicine was much simpler; nurses soon married and quit the profession. Today, the pay is more than $5 an hour; medical care is infinitely more complex and there is more to be done; and nurses remain in the profession, which requires continuing education and special skills.

In the past there was a great need for "bedside nurses" and there still is. Now there is need for *teachers* of nursing who can conduct classes at all levels and supervise hospital nursing. There is need for nurses who know special procedures in the operating room, particularly anesthesia, and who are skilled in intensive care and support systems. The office nurse needs special training, and no doctor dares practice without her help in these dangerous times.

The fact is that the nursing profession has come of age. Nursing is a companion to the medical profession—not a competitor, as some have feared. There are public health problems that require medical supervision, but the actual procedures are carried out by properly educated and experienced nurses. There will be much more of this in the future.

Therefore, nursing education must be brought up to date. The old concept of a nurse who is a glorified bedpan jockey and repeats the refrain, "Yes, Doctor," no longer fills the prescription. Today any wise physician listens when a nurse speaks, and the nurse has no less respect for the doctor who has kept up with his profession. It is a faster race, and we need all the help we can get!

To put nursing education under medical school administration has the hazard of a return to the old prejudices against higher education for nurses. Medical school administrators have their hands full, and then some. One of their big problems is to find medical teachers. Just because a bright MD or PhD is competent in research does not make him a teacher.

Let the nursing profession do their own thing!

W. E. Lockhart, Jr, MD, Alpine.

American Party Platform Omitted

Dear Ms. Baker:

The October 1976 issue of *Texas Medicine* was a shock, surprise, and disappointment to me on: (1) design of front cover, and (2) feature article on page 98 on Republican and Democrat platforms. *Texas Medicine*, biased in the design of the cover and in the content of the article, was not *intellectually honest* with its readers (especially the uninformed) as to their choices in the November election. Presentation of only part of the total picture, as was done, can never lead to an intelligent conclusion and proper action. This is also *censorship* similar to that of the biased controlled news media in this country. Was this an intentional act on the part of the editorial writer—and was the artist also directed to convey, via subliminal control, that there were only two choices for the voter? It is obvious that the intent was to get the doctors to vote Republican.

Dr. Sam A. Nixon's TEXPAC article, page 140: "For success we urge you to . . . (2) *Study the issues and candidates*" (italics mine) was a timely admonition, and he did not imply the choice was one of two named parties.

The Republican Secretary of State stated immediately after the Republican Convention on national TV that the platform was simply an instrument by which to get nominated. If the author was up on his subject, he would know that the conservative parts of the platform were put in by Reagan delegates and *fought* by Ford delegates who are for nationalized medicine.

For the meaning of platforms, let me quote from an article, "Conservatives and the 1976 Plat-

form," by William P. Hoar, in the October 1976 issue of *American Opinion*, page 13: "A political platform is a declaration of principles and policies adopted by a political party for its candidates—a sort of contract with the people. Ideally it should be just that. But Sen Barry Goldwater, a Ford supporter, tells us that in the eyes of presidential candidates the 'Political platforms are a packet of misinformation and lies.' In your heart you know he's right."

President Gerald Ford has called for national health insurance. Has he stopped his subordinates in HEW and his other subordinates from working for NHI, from pushing more controls on medicine, drugs, and us? The captain is responsible for all in his ship.

Realistically, *we are* in a debt-ridden socialistic state, *put there* by Democrat and/or Republican congressmen and presidents (who, incidentally, swore to uphold the Constitution). Certainly, since Roosevelt first won and then completely ignored his platform, candidates have considered platforms as the Russians do treaties—made to be broken.

Finally, to set the record straight, and to be politically realistic and honest with the readers, there is another party, the American Party, which could be our salvation. To quote the plank on health care of the American Party: "No government interference in the doctor-patient relationship; encourage private medical insurance programs; allow freedom of choice in health care; no involuntary mass medication; no socialized medicine."

The American Party stands for the Constitution, fiscal responsibility, and free enterprise. It is opposed to bureaucratic edicts and controls. It takes an 80% vote to change its constitution and principles. To get the support of the American Party, its candidates have to pledge support of its constitution *and* the United States Constitution, and this would mean *no* nationalized medicine.

So in all honesty, how can your supposedly reputable journal ignore the existence of a ballot position party which is 100% opposed to socialism with its nationalized medicine? Will you correct your omission by publishing the platforms of the American Party, Socialist Workers Party, and any others with ballot position, just as you already published platforms of the Socialist-perpetrating Democrats and Republicans? This will not undo the damage since you will not get this correction to the readers of *Texas Medicine* before the November vote. Nevertheless I feel this should be printed as a letter to the editor.

S.P.R. Hutchins, MD, Houston.

Letters to the editor are welcome for consideration in this column. Letters are reviewed by consultants and the editors for appropriateness. The Board of Publication and the editors reserve the right to excerpt letters in accordance with available space and editorial judgement as recommended by consultants. The editors shall not be responsible for views expressed by authors in this column.

Address letters to Ms Marilyn Baker, Managing Editor, *Texas Medicine*, 1905 North Lamar Blvd, Austin, TX 78705.

MEDICAL ARTS CLINIC ASSOCIATION of corsicana

DERMATOLOGY & SYPHILOLOGY
JOSEPH M. GLICKSMAN, M.D., F.A.A.D.*
J. D. SMITH, M.D., F.A.A.D.*

EAR, NOSE, & THROAT
PHILLIP M. AWTREY, M.D., F.A.A.O.O.*

GENERAL & VASCULAR SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D., F.A.C.S.*

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
ALLEN M. JONES, M.D.*
JOHN D. NELSON, M.D.*
L. BRYAN COTTON, JR., M.D.*
KENT ROGERS, M.D.

FAMILY PRACTICE DEPARTMENT
ENNIS, TEXAS
W. B. KINZIE, M.D.*

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
W. GENE MURFF, M.D., F.A.C.O.G.*
NEAL GREEN, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D., F.A.A.O.O.*

ORTHOPAEDIC SURGERY
WALLACE E. LOWRY, JR., M.D.*
JAMES A. DOTSON, M.D.*

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D., F.A.A.P.*

UROLOGY
WILLIAM V. HALL, M.D.*

EXECUTIVE DIRECTOR
DON L. BOWEN, M.G.M.A.

* DIPLOMATE OF THE AMERICAN BOARD

TRAVIS CLINIC FOUNDATION AND TRAVIS CLINIC ASSOCIATION

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D., Emeritus
Ken E. Kuykendall, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
Mary A. Bone, M.D.
J. A. Armstrong, M.D.
D. B. Turner, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Pediatrics:
M. L. Gray, M.D.
D. D. DeWitt, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

Podlatry:
Daniel H. Phelps, D.P.M.

Psychology:
Charles T. Fries, Ed.D.

Business Manager:
Gerald L. Burks

When a period of intensive residential treatment is indicated: THE BROWN SCHOOLS

A community within a community to provide individualized treatment within a residential milieu.

A program designed for: psychiatric illness, behavior problems in neurological patients, and rehabilitation of the mentally retarded.

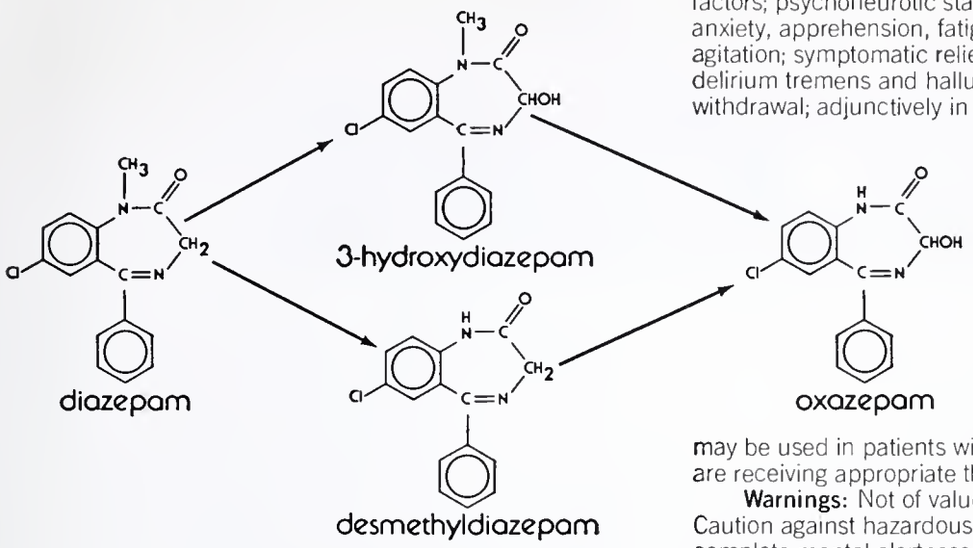
Three separate treatment centers plus a transitional treatment center provide individually prescribed programs of care, education, treatment and training for children, adolescents and adults. The centers are geographically separated to provide the proper residential group, yet near enough to benefit from the combined training and experience of a wide range of staff members.

For information, write: The Director of Admissions, Department K-1, THE BROWN SCHOOLS, P.O. Box 4008, Austin, Texas 78765. Toll Call: (512) 478-6662/Out of State Free: (800) 531-5305/ From Texas Free: (800) 292-5404

All our programs are accredited by the appropriate Councils of the Joint Commission on Accreditation of Hospitals.

THE BROWN SCHOOLS

A pharmacokinetic character all its own



Valium (diazepam) is a benzodiazepine with a distinctive pharmacokinetic profile

The pharmacokinetic profile of Valium is one of the characteristics that sets it apart from other benzodiazepines. Consider, in particular, the metabolic pathway of Valium. The three major metabolites of Valium exhibit significant pharmacologic activity—and so, of course, does the parent substance—diazepam itself. All combine to produce the characteristic clinical response seen with Valium. The response you have come to know, to want and to trust.

Pharmacokinetic studies also demonstrate that Valium has a pattern of absorption, distribution, metabolism and elimination that is reliable and consistent. And, although the pharmacokinetics of a drug cannot, at present, be specifically related to its clinical effects, it is clearly a factor that distinguishes one product from another by providing important insights into how each moves through the patient's body.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Editorials

GOVERNMENT TO INVESTIGATE MEDICAID ABUSE IN TEXAS

Perhaps someday the government will investigate Medicaid's abuse of physicians, but first they're going after physicians and others who are making dishonesty pay through Medicaid.

Beginning in January, fraud and abuse teams of the Medical Services Administration of the Social and Rehabilitation Service will be in Texas, trying to determine whether physicians, pharmacies, or laboratories are abusing or defrauding the Medicaid program.

Fifty physicians in Dallas/Fort Worth and 25 in Houston and in San Antonio will be selected from the "high dollar" volume group for audits that will include interviews of the physicians and their employees as well as examination and (at the physician's discretion) photocopying of certain records.

There is no escaping the fact that these interviews and investigations will take up a considerable amount of the physician's time. Also, the investigating teams will require clinical information sufficient to verify that a physician did perform a service for a patient on a given date, but they cannot require nonpertinent or confidential clinical information.

Is abuse so widespread that this expensive investigation can be justified? No one really knows. Texas does not permit operation of the so-called Medicaid mills, but nationally the cost of fraud and abuse within the program is said to range from 5-15%. In dollars, that would top out at around $3 billion.

Keep in mind, however, that only 10% of Medicaid funds go to physicians. Nursing homes receive 38%, hospitals 32%, drugs 7%, outpatient services 7%, dental services 3%, and miscellaneous services 3%.

The sad and frustrating thing about the whole situation is that thousands of conscientious physicians accept Medicaid's substandard payments and try to do right by the paperwork, and yet their reputations suffer because of the few whose actions generate sensational headlines about doctors who get rich quick via government health programs.

That hurts, and the honest physician may well call, "Foul! *I'm* the one who is being abused!"

Officially as well as morally, there can be but one policy: Fraud and any other wrongdoing in dealing with government health programs is condemned, and the Texas Medical Association will cooperate with efforts to bring defrauders to justice through due processes.

At the same time, the TMA opposes any witch hunt, and will stand firm to protect the confidentiality of the doctor-patient relationship.

TMA officials have conferred at length with government officials, and a memorandum of understanding on the policy and procedures to be employed in the investigation has been drafted.

The negotiations went well, and TMA representatives feel that the agreed-upon procedures are reasonable and will allow physicians to cooperate while still preserving the integrity of their confidential records.

A. Rex Kirkley, MD, Belton, Chairman, TMA Council on Tax-Financed Health Care Programs.

eb77

TexasMedicine

TMA Board sets goals for 1977 accomplishments

HEW announces single-state PSRO for Texas

Assessing fetal maturity

Psychiatric manifestations of hyperparathyroidism

Hemodynamic effects of oral and sublingual isosorbide dinitrate in patients with acute coronary insufficiency

Emergency department categorization

LIBRARY
U.C. SAN FRANCISCO
FEB 23 1977

LIBRARY
SITIONS DIV.
OF CALIFORNIA, S. F.
RANCISCO CA 94143

##

Torbett-Hutchings-Smith Memorial Hospital
and Torbett-Hutchings-Smith Clinic

322 Coleman Street
Post Office Box 60

Marlin, Texas 76661

Telephone: 883-3561

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M. D., F.A.C.S.
Cecil A. McRee, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M. D.
C. G. Brown, M.D.

VASCULAR SURGEY
Cecil A. McRee, M.D., F.A.C.S.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

TRAUMATIC AND ORTHOPEDIC SURGERY
D. R. Swetland, M.D., F.A.C.S.

ALLERGY
S. W. Hughes, M.D.

CARDIOLOGY
W. F. McKinley, Jr., M.D.

OBSTETRICS AND PEDIATRICS
William Pickvance, M.D.

RADIOLOGY
J.M. Brown, M.D., F.A.C.R.

PATHOLOGY
Ronald E. Henderson, Jr., M.D.
David M. McTaggart, M.D.
S. M. Bunn, Jr., M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

NEUROSURGERY
Harry W. Slade, M.D., F.A.C.S.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Associate Administrator:
Larry Parsons

Director-Coordinator, Nursing Service:
Vera Bee, R.N.

Director of Patient Care:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street

DALLAS, TEXAS 75211

Telephone 823-4151

INTERNAL MEDICINE
John B. Allen, M.D., D.A.B.I.M.
Morris E. Magers, M.D.,D.A.B.I.M.
Channing Woods, M.D.
Richard C. Stone, M.D., Gastroenterology
Landon W. Stewart, M.D., D.A.B.I.M.
Cloyce L. Stetson, Jr., M.D., D.A.B.I.M.
David S. Sowell, III, M.D., D.A.B.I.M., Cardiology
Don E. Cheatum, M.D., D.A.B.I.M., and D.A.B. Rhu., F.A.C.P.
W. Mark Armstrong, M.D., D.A.B.I.M.
Sam W. Waters, M.D.
George E. Thomas, M.D., D.A.B.I.M.
Steven P. Bowers, M.D., D.A.B.I.M.

ORTHOPEDIC SURGERY
George S. Phalen, M.D., D.A.B.O.S., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
John B. Miller, III, M.D.
Vernie D. Bodden, M.D.

PEDIATRICS
Halcuit Moore, M.D., D.A.B.P., F.A.A.P.
P. E. Luecke, Jr., M.D., D.A.B.P., F.A.A.P.
Larry Gray, M.D., D.A.B.P., F.A.A.P.

GENERAL SURGERY
George P. Fosmire, M.D., D.A.B.S., F.A.C.S.
Miller S. Bell, M.D., D.A.B.S., F.A.C.S.

UROLOGY
Harry M. Spence, M.D., D.A.B.U., F.A.C.S.
William H. Hoffman, M.D., D.A.B.U., F.A.C.S.
Richard B. Dulany, M.D., D.A.B.U., F.A.C.S.

RADIOLOGY
Raymond W. Burford, M.D., D.A.B.R.
Joe B. Caldwell, M.D., D.A.B.R.
James B. Evans, M.D., D.A.B.R.

DERMATOLOGY
William N. New, M.D., F.A.A.D., F.A.C.P.

OTOLARYNGOLOGY AND OTOLOGIC SURGERY
D. W. Shuster, M.D., D.A.B.O.

OPHTHALMOLOGY
R. M. Burnside, M.D., D.A.B.O.
James M. Copps, M.D., D.A.B.O.

DENTISTRY AND DENTAL SURGERY
J. Boyd Hollabaugh, D.D.S.
William F. Walton, D.D.S.
George D. Blake, D.D.S.
Larry L. Cowsert, D.D.S.

ADMINISTRATION
C. H. Rosamond, Administrator
Jack Green, Associate Administrator

DIRECTOR OF NURSING SERVICE
Miss Billye J. Norris, R.N.

INACTIVE STATUS
George M. Underwood, M.D., D.A.B.I.M., F.A.C.P., Gastroenterology
P. E. Luecke, Sr., M.D., D.A.B.P., F.A.A.P
William H. Potts, M.D., F.A.C.P., Internal Medicine
Ozro T. Woods, M.D., Surgery Emphasizing Tumors
J. Wilbur Bourland, Jr., M.D., Obstetrics and Gynecology
Adam D. Green, M.D., Surgery
B. Celia Slaughter, M.D., D.A.B.P., F.A.A.P.
John B. Bourland, M.D., D.A.B.O.G.

THE ANXIETY-SPECIFIC.

- a predictable pattern of patient response
- seldom associated with serious side effects, in proper dosage
- rarely interferes with mental acuity
- used concomitantly with many primary medications
- three dosage strengths meet most patient needs

LIBRIUM® ℞

chlordiazepoxide HCl/Roche

5mg, 10mg, 25mg capsules

Libritabs® (chlordiazepoxide) available in 5 mg, 10 mg and 25 mg tablets.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) *Capsules*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) *Tablets*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see following page.

THE ANXIETY-SPECIFIC.

Since its discovery in the research laboratories at Roche, Librium has been the object of ongoing pharmacologic and clinical investigation.

The published record on Librium is enormous. So large, in fact, we put it into a computer literature retrieval system to make it more accessible in answering your inquiries.*

It's a record that reveals a consistent pattern of patient response. A highly favorable benefits-to-risk ratio. And minimal interference with many primary medications.

Doing one thing well. Basically, that's what Librium is all about.

LIBRIUM® ℞
chlordiazepoxide HCl/Roche

ROCHE

*If you have a question about Librium or any other Roche product, write to Professional Services, Roche Laboratories, Nutley, New Jersey 07110.

Please see preceding page for a summary of product information.

Texas Medicine
VOL 73 FEBRUARY 1977

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION
Don G. Harrel, MD, Dallas
Chairman
Sam N. Key, MD, Austin
Vice-Chairman
Walter A. Brooks, MD, Quanah
Secretary
R. Harvey Bell, MD, Palestine
C. W. Yates, MD, Rosenberg
Paul R. Meyer, MD, Port Arthur
Joe T. Nelson, MD, Weatherford

TMA OFFICERS
L. S. Thompson, MD, Dallas
President
Sheridan S. Evans, MD, McAllen
Vice-President
John M. Smith, Jr., MD, San Antonio
President-Elect
James G. Morris, MD, Lubbock
Secretary
Ben R. Keller, Jr., MD, Arlington
Treasurer
C. Lincoln Williston, Austin
Executive Director

EDITORIAL STAFF
1905 N Lamar Blvd, Austin 78705
Telephone: 512-477-6704
Marilyn Baker, Managing Editor
Rae Vajgert, Assistant Managing Editor
Elise David, Assistant Editor
Donna Billie, Editorial Assistant
Patty Mullins, Secretary

ADVERTISING STAFF
1801 N Lamar Blvd, Austin 78701
Jon R. Hornaday, Advertising Director
Anne Shelnutt, Advertising Manager

SCIENTIFIC PUBLICATION COMMITTEE
Joseph M. Abell, Jr., MD, Austin
Chairman
Robert Askew, MD, Austin
Vice-Chairman
Ronald P. Boren, MD, Austin
Ernest C. Butler, MD, Austin
Jesse D. Cone, MD, Odessa
C. W. Daeschner, MD, Galveston
George A. Gates, MD, San Antonio
Tracy R. Gordy, MD, Austin
R. Maurice Hood, MD, Austin
Paxton H. Howard, Jr., MD, Temple
Joseph Lancaster, MD, Austin
Francis E. McIntyre, MD, Austin
Paul C. Peters, MD, Dallas
Richard S. Ruiz, MD, Houston
H. Irving Schweppe, Jr., MD, Houston
Theodore P. Votteler, MD, Dallas

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS
1801 N Lamar Blvd, Austin 78701
c/o Ray Riggs, Business Manager
$4 per year for members; $8 for non-members; $14 for foreign; $6 for libraries, hospitals, and universities; $4 for medical students. Single copy: $1.25.

CHANGE OF ADDRESS
1801 N Lamar Blvd, Austin 78701
c/o Edward R. Bierschenk, Membership Director

Copyright 1977 by the Texas Medical Association. Owned and issued monthly by the Association.

Second Class Postage paid at Fort Worth, Texas, under act of March 3, 1879.

Contents

Scientific Articles

47 Assessing fetal maturity: amniotic fluid assessment
C. M. Hinkley, MD; R. B. Wait, MD; A. Werch, MD; P. K. Besch, PhD

53 Hemodynamic effects of oral and sublingual forms of isosorbide dinitrate in patients with acute coronary insufficiency
Lawrence R. Poliner, MD; William Ritter, MD; Armand J. Wohl, MD; J. V. Nixon, MD; James T. Willerson, MD

59 Psychiatric manifestations of hyperparathyroidism
Steven Rosenblatt, MD; Louis A. Faillace, MD

65 Emergency department categorization
Ralph E. Cross, Jr

Feature

75 On the way to one Texas PSRO region

Editorials

122 Who's minding your future? Your legislator, that's who!

122 TMA leaders set directions for association work in 1977

News

7 Medical cost control isn't easy, Dr Parrott warns

7 Dr Frank Jirka predicts no massive national health insurance

8 Texas Secretary of State says Gov Briscoe will help solve health problems

10 TMA outlines top priorities for 1977

12 TMA survey shows professional liability insurance crisis increases

13 TMA announces support for SB 103 and HB 370

Departments

27 Capital Comments

33 Continuing Education

40 Meetings

79 Medicine and the Law

81 Medical Newsmakers

88 Medicine in Literature

91 Deaths

On The Cover

Setting its directions for the future, the Texas Medical Association has adopted priorities for 1977; in each priority area, the several specific tasks have been assigned to specific boards, councils, or committees of the Association. See editorial on page 122, and news story on page 10.

Next Month

Articles scheduled for March are about how the physician can reduce patients' (infants and adults) exposure to sucrose and thereby help them reduce tooth decay; gas in the portal vein of adults with necrotizing enteropathy; and the hemiblocks—relationship to abnormal axis deviation.

Brief Summary of Prescribing Information

Actions: Pyrvinium pamoate appears to exert its anthelmintic effect by preventing the parasite from using exogenous carbohydrates. The parasite's endogenous reserves are depleted, and it dies. Povan is not appreciably absorbed from the gastrointestinal tract.

Indication: Povan is indicated for the treatment of enterobiasis.

Warnings: No animal or human reproduction studies have been performed. Therefore, the use of this drug during pregnancy requires that the potential benefits be weighed against its possible hazards to the mother and fetus.

Precautions: To forestall undue concern and help avoid accidental staining, patients and parents should be advised of the staining properties of Povan. Care should be exercised not to spill the suspension because it will stain most materials. Tablets should be swallowed whole to avoid staining of teeth. Parents and patients should be informed that pyrvinium pamoate will color the stool a bright red. This is not harmful to the patient. If emesis occurs, the vomitus will probably be colored red and will stain most materials.

Adverse Reactions: Nausea, vomiting, cramping, diarrhea, and hypersensitivity reactions (photosensitization and other allergic reactions) have been reported. The gastrointestinal reactions occur more often in older children and adults who have received large doses. Emesis is more frequently seen with Povan Suspension than with Povan Filmseals.

How Supplied: Each Povan Filmseal® contains pyrvinium pamoate equivalent to 50 mg pyrvinium, supplied in bottles of 50 (NDC 0710-0747-50; NSN 6505-00-134-1966). Povan Suspension, a pleasant-tasting, strawberry-flavored preparation containing pyrvinium pamoate equivalent to 10 mg pyrvinium per milliliter, is supplied in 2-oz bottles (NDC 0071-1254-31; NSN 6505-00-890-1093).

RC/RD PD-JA-1699-2-P (8-76)

Parke, Davis & Company
Detroit, Michigan 48232

When it's pinworms, treat the family

Povan® (pyrvinium pamoate)

- over 17 years of proved clinical effectiveness and safety
- no measurable absorption from the GI tract—minimal systemic side effects
- one dose—one time—that's all that's usually required
- two dosage forms: Tablets and Suspension—suitable for the entire family

Povan—there's a form for every member of the family.

PARKE-DAVIS

A PROFESSIONAL SOURCE OF COMFORT FOR INTERNAL AND EXTERNAL ANORECTAL CONDITIONS

Anusol-HC®

suppositories and cream with hydrocortisone acetate. Rx only

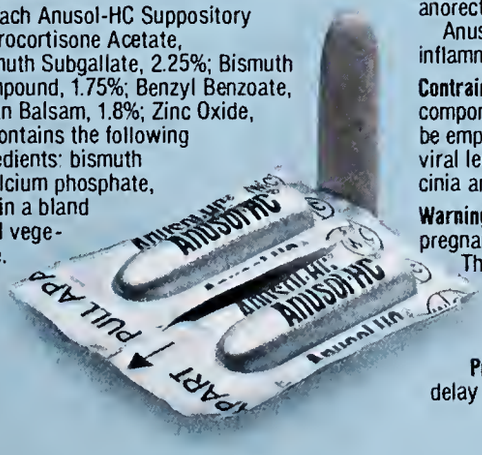
pain and burning respond in minutes

ANUSOL-HC® SUPPOSITORIES
Rectal Suppositories with Hydrocortisone Acetate

ANUSOL-HC® CREAM
Rectal Cream with Hydrocortisone Acetate

CAUTION: Federal law prohibits dispensing without prescription.

Description: Each Anusol-HC Suppository contains Hydrocortisone Acetate, 10.0 mg, Bismuth Subgallate, 2.25%; Bismuth Resorcin Compound, 1.75%; Benzyl Benzoate, 1.2%; Peruvian Balsam, 1.8%; Zinc Oxide, 11.0%; also contains the following inactive ingredients: bismuth subiodide, calcium phosphate, and coloring in a bland hydrogenated vegetable oil base.



Each gram of Anusol-HC Cream contains Hydrocortisone Acetate, 5.0 mg; Bismuth Subgallate, 22.5 mg; Bismuth Resorcin Compound, 17.5 mg; Benzyl Benzoate, 12.0 mg; Peruvian Balsam, 18.0 mg; Zinc Oxide, 110.0 mg; also contains the following inactive ingredients: propylene glycol, bismuth subiodide, propylparaben, methylparaben, polysorbate 60, sorbitan monostearate in a water-miscible base of mineral oil and glyceryl monostearate. Nonstaining.

Indications: Anusol-HC is adjunctive therapy for the symptomatic relief of pain and discomfort in: external and internal hemorrhoids, proctitis, papillitis, cryptitis, anal fissures, incomplete fistulas, and relief of local pain following anorectal surgery.

Anusol-HC is especially indicated when inflammation is present.

Contraindications: History of sensitivity to any component. Topical corticosteroids should not be employed in tuberculous, fungal and most viral lesions of the skin (including herpes, vaccinia and varicella).

Warning: The safe use of topical steroids during pregnancy has not been fully established. Therefore, during pregnancy they should not be used unnecessarily on extensive areas, in large amounts or for prolonged periods of time.

Precautions: Symptomatic relief should not delay definitive diagnoses or treatment. When there is bacterial skin infection, topical corticosteroids should be used only with appropriate concomitant antimicrobial therapy. Prolonged or excessive use of corticosteroids might produce systemic effects.

Dosage and Administration: Anusol-HC Suppositories: Remove foil wrapper and insert suppository into the anus. One suppository in the morning and at bedtime, for 3 to 6 days or until inflammation subsides. Then maintain patient comfort with regular Anusol.

Anusol-HC Cream: Adults—After gentle bathing and drying of the area, remove tube cap and apply to the exterior surface and gently rub in. For internal use, attach the plastic applicator and insert into the anus by applying gentle continuous pressure. Then squeeze the tube to deliver medication. Cream should be applied 3 or 4 times a day for 3 to 6 days until inflammation subsides.

Supplied: Suppositories—boxes of 12 (N 0047-0089-12); in silver foil strips with Anusol-HC printed in black.

Cream—one-ounce tube (N 0047-0090-01) with plastic applicator; detachable label.

Store Between 59° and 86° F (15° and 30° C).

Full information is available on request.

Warner/Chilcott

Division,
Warner-Lambert Company
Morris Plains, N.J. 07950

AN-GP-71 2/C

News in brief

Medical costs

Profound changes are taking place in the medical care system in the United States and very often those changes are based on cost considerations, said former AMA President Max Parrott, MD. Physicians too often have ignored the total diagnostic and clinical costs, and hospitals have not been as effective as they might have been in moderating costs, Dr Parrott warns . . . 7

National health insurance

President Jimmy Carter won't live up to his campaign pledges of national health insurance because a massive program isn't feasible, said Frank J. Jirka, MD, member of the AMA Board of Trustees. However, there will be greater restrictions on Medicare and Medicaid, he said. The public is not all that dissatisfied with health care delivery, but it is disgusted with government interference, he said . . . 7

Priorities

TMA will work to ease the professional liability insurance crisis in 1977. Other TMA priorities include influencing national action on national health insurance proposals and implementation of one Professional Standards Review Organization in Texas . . . 10

Professional liability insurance

A new survey of more than 5,500 Texas physicians conducted by TMA late in 1976 shows the explosion of medical malpractice claims against doctors, which began in 1972, has increased dramatically. Seventy percent of all suits and claims ever filed have been filed since Jan 1, 1972. Thirty-one percent of all Texas physicians have been unable to escape claims or lawsuits. Fifty-six percent of doctors in private practice have had to raise fees because of professional liability insurance premium increases . . . 12

News in detail

Medical cost control isn't easy, Dr Max Parrott warns

Profound changes are taking place in the medical care system in this country, and very often the changes are based primarily on cost considerations, said Max Parrott, MD, immediate past president of the American Medical Association.

There are some very dangerous pitfalls in all this, Dr Parrott warned Texas physicians at the TMA 1977 Update on Legislative Issues on Jan 15.

Dr Parrott, chairman of the Commission on the Cost of Medical Care, said there is much misinformation circulating about the true causes of rising costs of medical care. The public-at-large must be provided with the right information, he said.

The commission will provide a balanced view of factors leading to the escalating costs, and outline alternatives in confronting cost problems, he said.

"Our profession too often has ignored the total cost of the diagnostic and clinical voyage. And hospitals, along with their medical staffs, have not been as effective as they might have been in moderating costs," Dr Parrott said.

"I am confident that the new commission will deduce the proximate causes of escalating expenditures which include strong inflationary pressures in general . . . for which government itself must shoulder a larger share of the blame," Dr Parrott said. Other reasons include the remarkable improvements in clinical and technological resources, and the expansion of benefits and of eligible recipient populations under government health programs, he said.

Other factors include soaring professional liability insurance premiums for both hospitals and physicians, costs which must be passed on to the patients, Dr Parrott said.

There are dangers in medical care systems financed and controlled by government, the physician said.

The quality of care gets second billing under the costs of care, and the federal budget needs take priority over patient needs, he warned.

To standardize medical care, to break it down into so much care at so much cost per patient results in standardized physicians and standardized patients, Dr Parrott said.

There are no easy ways to resolve costs problems, he said, and physicians have been aware of the dangers all along.

"We've got to do our best to see to it that the choices our society does make are based on a realistic assessment of the various consequences and alternatives involved," Dr Parrott said. That is the part the National Commission on the Cost of Medical Care, sponsored by the AMA, can play, he said.

Dr Frank Jirka predicts no massive national health insurance

President Jimmy Carter won't live up to his campaign rhetoric of national health insurance because a massive insurance program is not feasible, said Frank J. Jirka, MD, a member of the AMA board of Trustees.

Congress probably won't enact national health insurance this session because it is concentrating on cleaning up Medicaid and Medicare abuses by health care providers, Dr Jirka said.

The Congress may come up with something more on catastrophic coverage, if it can define a catastrophe, Dr Jirka said.

The Berwyn, Ill, physician had other predictions while addressing the 1977 TMA Update on Legislative Issues on Jan 15.

There will be greater restrictions on Medicare and Medicaid, he said.

"The public is not all that dissatisfied with health care delivery," Dr Jirka said, but it is disgusted with government interference.

The doctor warned TMA physicians to be sensitive to developing government programs. Everytime another layer is added, costs go up, he said.

Health systems agencies in their truest forms are political organizations, Dr Jirka said.

Physicians should actively participate in medical issues, he said. "When government gets into the practice of medicine, we in medicine should get in the practice of government. Physicians need to get involved," Dr Jirka said.

Frank J. Jirka, MD

"The public is disgusted with government interference."

Texas Secretary of State says Gov Briscoe will help solve health problems

Major health concerns will be solved to the benefit of the people of Texas, and Gov Dolph Briscoe will be a willing helper, the Texas Secretary of State has predicted.

Mark W. White, JD, Texas Secretary of State, told those attending the TMA 1977 Update on Legislative Issues on Jan 15 that there is an unprecedented number of health bills facing the 65th Texas Legislature.

Max Parrott, MD

"There are dangers in medical care systems financed and controlled by the government."

Gov Briscoe wants to eliminate duplication of services, White said. To achieve this he proposed the Department of Human Resources.

Gov Briscoe is also asking for increased funding for medical education, White said.

The recommendations of the Hobby Clayton Commission will help reduce the cost of government, White said. The governor has a "commitment against greater and greater spending" without the ability to pay for it, the Secretary of State said.

"The people are tired of oppressive government," White said. Cost comes from government interference, he added.

White listed other major issues of the 65th Legislature. Education is one of the governor's primary concerns, White said. Gov Briscoe is seeking increased support for poor school districts.

Texas is the largest producer and consumer of energy, White said. Gov Briscoe will ask for the elimination of sales tax on utility bills, and

UPSETS HAPPEN

BUT YOU CAN PROTECT YOURSELF FROM
THE UNEXPECTED WITH THE TEXAS
MEDICAL ASSOCIATIONS GROUP PLANS.

LIFE INSURANCE • DISABILITY INCOME
OFFICE OVERHEAD • PERSONAL ACCIDENT
MAJOR MEDICAL

Write for a Brochure and Application Today.

TEXAS MEDICAL ASSOCIATION
1801 N. LAMAR BLVD.
AUSTIN, TEXAS 78701
Ph. 512/476-6551

Underwritten By

Prudential

Mark W. White, JD

"The governor is a willing helper and supporter in solving health problems."

urge the use of alternative forms of energy, he said.

In the area of law enforcement, Gov Briscoe is seeking expansion of the court system to provide speedy trials, White said.

TMA outlines top priorities for 1977

Easing the professional liability insurance crisis in Texas is the number one priority of the Texas Medical Association in 1977.

Members of the TMA Executive Board met and agreed on TMA priorities in a December 1976 meeting.

C. Lincoln Williston, TMA executive director, outlined TMA priorities at the 1977 Winter Conference on Jan 15. Key provisions in the legislative package to help remedy the insurance crisis include a reasonable limitation on awards, a statute of limitations on filing malpractice suits, voluntary binding arbitration, and strengthening the disciplinary authority of the State Board of Medical Examiners.

On the national scene, TMA will devote high priority to influencing action on national health insurance legislation, Williston said. TMA will strive for minimum federal involvement in the administration of any plan and oppose administration through the Social Security System or the use of Social Security taxes to finance it.

Another priority, implementation of one Professional Standards Review Organization (PSRO) in Texas has been partially satisfied, Williston said. The Department of Health, Education, and Welfare has anonunced a single PSRO for Texas. TMA favors the designation of the Texas Institute for Medical Assessment (TIMA) as the state PSRO.

TMA will also be involved in the implementation of health planning, Williston said. As Public Law 93-641 is enacted, TMA will work to provide support for physicians and their associates who are active in health planning at the local level.

Cost containment is a paramount issue in all government-sponsored health care programs, and also for TMA, Williston said. The TMA staff is compiling a survey of physician's medical practices. TMA will work to prepare information and recommendations on what physicians can do to control costs.

Another priority is to provide effective representation for physicians in government-sponsored health care programs in areas of updating fee profiles, increasing Medicaid reimbursements to match those of Medicare, acceptance of uniform claims forms, and other areas.

TMA will work to develop establishment of additional residency programs in family practice and primary care, Williston said. The number of residency positions has not kept pace with the number of new Texas doctors receiving their degrees.

TMA will also work to counter assaults on professionalism, Williston said. TMA will work to provide the very best medical care possible for Texans with particular emphasis on access to health care, the distribution of physicians, and pilot programs in rural health.

Other TMA goals include strengthening relationships with medical students, residents, specialty societies, the Woman's Auxiliary, and the Texas Medical Foundation.

TMA will also intensify continuing medical education activities, Williston said.

Gov Briscoe appoints TMA members to UT and A&M boards of regents

Gov Dolph Briscoe has appointed or reappointed six persons to the boards of regents of the University of Texas and Texas A&M University Systems, including two TMA members.

Appointed to the University of Texas board were Sterling Fly Jr., MD, Uvalde, a TMA member; Mrs Jane Blumberg, Seguin; and Jess Hay, Dallas. Appointed to the A&M University board were John B. Coleman, MD, Houston, a TMA member; John Blocker, Houston; and H.C. "Dulie" Bell Jr., Austin.

Joe T. Nelson, MD, Weatherford, a member of the TMA Board of Trustees, completed his term on the UT board of regents.

Besides serving on the UT board, Dr Nelson is also a member of the AMA Board of Trustees. He has received the North Texas State University Presidential Alumni Award, and the TMA Distinguished Service Award.

Other tributes have also been paid to Dr Nelson. One of Dr Nelson's patients in Weatherford said, "Where the well-being of his patients and better health care for all humanity are concerned, Dr Nelson is one giant of a man, possessing almost superhuman strength and determination."

TMA Annual Session is in Houston May 12-15

The 1977 TMA Annual Session, scheduled May 12-15 in Houston, will involve 21 scientific section programs, ten special programs, and 32 related organization meetings.

The Houston meeting will feature 51 prominent guest speakers, and 300 TMA members will make presentations. Approximately 100 special essayists including researchers, therapists, attorneys, and other prominent professional representatives will present papers.

General meeting luncheon speakers include Dr Edward Teller, a physicist, and Rep Paul G. Rogers, Florida Congressman and Chairman of the House Interstate and Foreign Commerce Committee.

Many of the programs will qualify for Category I credit hours for the AMA Physicians Recognition Award and these will be cited in the Annual Session program.

The TMA House of Delegates will convene at 8 am on May 12, 13, and 14.

The Shamrock-Hilton Hotel will be headquarters for the scientific program. The House of Delegates will meet at the Houston Marriott Motor Hotel and the Woman's Auxiliary will meet at the Warwick.

TMA hotline provides legislative news update

The Texas Medical Association news hotline provides a two minute recording on legislative issues and other medical news.

The hotline is a toll-free number, 1-800-252-9231, available 24 hours. Information is updated frequently.

The hotline will be continued through the end of the 65th session of the Texas Legislature. It is sponsored jointly by TMA's Council on Medical Legislation and Council on Communication. The legislative news is prepared by the TMA staff.

TMA membership reaches 13,342

Membership in the Texas Medical Association reached 13,342 at the end of 1976, an increase of 621 over the previous year.

The increase was the largest increase ever in TMA.

Membership now has increased more than 2,200 in the past five years, a gain of 20%.

TMA survey shows professional liability insurance crisis increases

The explosion of medical malpractice claims against doctors, which began in 1972, has increased dramatically, according to a survey of more than 5,500 physicians conducted by TMA late in 1976.

The recently compiled physician survey updates information gathered in a similar, four-month study of Texas doctors conducted by TMA in cooperation with the Texas Medical Professional Liability Study Commission in 1975.

Before 1968, the number of claims against doctors was quite low. Since that time, the increase in the number of claims filed has grown rapidly, not only in the number of claims filed, but also in the number of claims and suits per 100,000 population.

Based on survey results, it is estimated that in 1970, only about 2.6 suits and claims were filed for every 100,000 people in Texas. During 1976, that number had increased to 8.8 claims and suits per 100,000 population.

Seventy percent of all suits and claims ever filed have been filed since Jan 1, 1972.

The TMA physician survey pointed out that 54% of all neurosurgeons have had a lawsuit or claim filed against them sometime during their professional careers. Forty-eight percent of all obstetrician-gynecologists, 49% of all orthopedic surgeons, and 41% of all physicians practicing general surgery have had to face claims and suits during their careers.

Thirty-one percent of all physicians in Texas have been unable to escape claims or lawsuits.

The TMA physician survey determined that 56% of doctors in private practice have had to raise fees because of professional liability insurance premium increases.

The increase in insurance premiums caused Texas physicians surveyed to increase fees an average of 9%.

The crisis is affecting doctor's decisions about what types of treatment they should offer. This trend is especially significant for smaller communities, because family physicians are forced to avoid some types of treatment to move into lower risk categories so they can afford adequate professional liability insurance.

Some physicians are unable to obtain adequate professional liability insurance. Seventy-five percent of Texas doctors are covered by less than the $1 million liability protection most doctors say they need.

The TMA survey pointed out that claims and suits are seeking larger amounts of money. During 1976, claims and suits for $1 million and more increased to 14.8% of the total, and those for between $500,000 and $1 million jumped to 18.5% of the total.

During 1976, claims and suits for $100,000 or more represented 71.8% of all claims and suits filed.

Most insurance companies have left the field of medical professional liability insurance coverage because malpractice claims are out of control.

Distribution of Physicians With and Without Insurance

	1976	1975
With Insurance	92.0%	94.7%
No Insurance Because Premium Cost Too High	5.5%	2.5%
No Insurance Because Choose Not To Maintain Coverage	2.0%	1.2%
No Insurance For Other Reasons	0.5%	1.6%

TMA announces support for SB 103 and HB 370

The Texas Medical Association has announced support for legislation to help remedy conditions which have caused the medical professional liability insurance crisis in Texas.

TMA president L.S. Thompson, Jr, MD, said Senate Bill 103 by Sen Ray Farabee and House Bill 370 by Rep Pike Powers will "enact recommendations of the Texas Medical Professional Liability Study Commission and help correct many of the problems which have combined to create the medical malpractice crisis."

Dr Thompson announced the TMA support at a news conference in Austin Jan 14, along with Ace Pickens, of the TMA Legal Counsel, and Jon Hornaday, TMA Director of Communication. News conferences were also held Jan 14 in Dallas, Houston and San Antonio to announce TMA support of the bills.

Milton V. Davis, MD, a member of the Study Commission, Steve Carrell, of the TMA Communication Department, and Will Barber, of the TMA Legal Counsel, announced the support at the Dallas news conference, while E. Don Webb, MD, a member of the Study Commission, and Jack Maroney, of the TMA Legal Counsel, announced TMA support in Houston. Dr Thompson, Pickens, and Hornaday announced TMA support in San Antonio.

Dr Thompson said companion bills SB 103 and HB 370 "implement the recommendations of the Study Commission, which was created by the Legislature to analyze the malpractice insurance situation and make recommendations for remedial legislation.

"The Study Commission represented all sides of the complex situation, and its work represents the most thorough study of the malpractice insurance situation ever undertaken in our state," Dr Thompson said.

Provisions of SB 103 and HB 370 allow for filing of cases without specific dollar amounts of alleged damages to eliminate unnecessary sensational publicity, and set up a procedure for the screening of health care liability claims by a Health Care Screening Panel.

The proposed legislation also implements procedures to allow binding voluntary arbitration, and tightens the statute of limitation so that claims must be made within one year from the date the claimant knew or should have known of the claim, or three years from the time of the alleged incident, whichever time occurs first.

The bills eliminate double recovery for damages through collateral sources and set reasonable limits on liability. Those limits are $500,000 for civil liability for damages, plus the probable cost of future medical expenses, and $100,000 for noneconomic losses, and $50,000 in the event of death without dependents.

The legislation also allows judges to structure awards to permit periodic payments to claimants rather than a single lump sum. The companion bills implement a sliding scale for attorney's fees and permit countersuits against claimants and attorneys for bringing suits in bad faith.

The bills create a Texas Medical Disclosure Panel to determine which risks and hazards for treatments and procedures should be communicated in advance to patients. The legislation also strengthens disciplinary powers of the Texas State Board of Medical Examiners and provides for district review committees to assist the board.

The bills extend the lifetime of the Joint Underwriting Association for two years and make improvements in the authority of the JUA.

At last, an Air Ambulance Service that understands and cares.

In an emergency, the last thing you need to worry about is an ambulance service. Air Ambulance of America is readily adaptable to your needs. We are qualified professionals available to assist in these emergencies on a moment's notice. Medical advisors are on staff to communicate precisely with you, the physician. In addition, medical attendants, MD's and RN's are available.

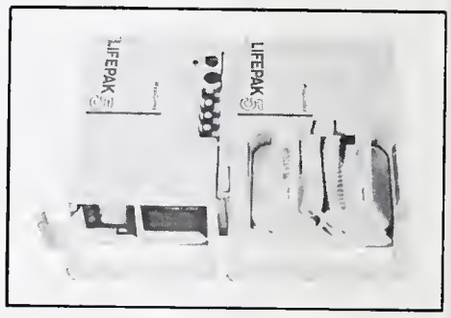
On-Board Monitoring and Features

Air Ambulance of America utilizes LIFEPAK 5, the most advanced electronic cardiac monitoring system available. It is a combination non-fade cardioscope/recorder and DC defibrillator. This light-weight system provides the ultimate in portability and versatility.

LIFEPAK 5 cardioscope/recorder and defibrillator act as one when joined, providing instant ECG information. However, each can operate independently because of separate removable Battery/Paks. While monitoring a patient's ECG through the patient cable, the unit is usually viewed. Although, a QRS beeper with adjustable volume level is provided for audible monitoring when the scope can not be watched.

Other features of LIFEPAK 5 include proper output for connection to a telephone modulator or radio telemetry transmitter allowing you to forward the latest data to the receiving hospital, sure-fire controls conveniently located right at the operators hands, Battery/Pacs that can be replaced in a matter of seconds, and more. LIFEPAK 5's small size enables it to be placed right on the patient's stretcher for continuous monitoring during transport.

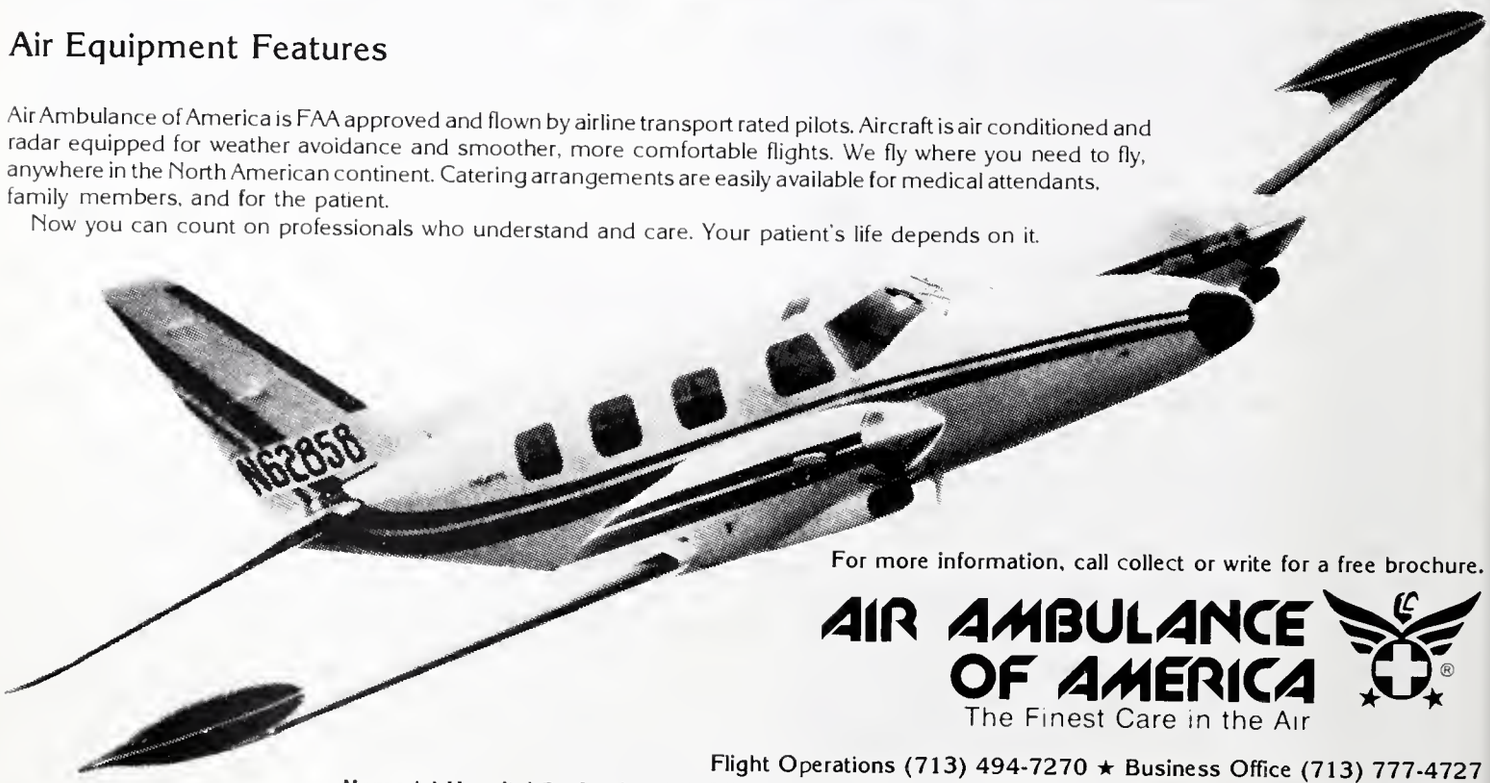
Also, Air Ambulance of America service features resuscitator, oxygen, large stretcher area with additional seats for medical attendants and family members, and expedient transportation for organ transplant tissues. Air Ambulance can also make arrangement for ground ambulance service.



Air Equipment Features

Air Ambulance of America is FAA approved and flown by airline transport rated pilots. Aircraft is air conditioned and radar equipped for weather avoidance and smoother, more comfortable flights. We fly where you need to fly, anywhere in the North American continent. Catering arrangements are easily available for medical attendants, family members, and for the patient.

Now you can count on professionals who understand and care. Your patient's life depends on it.



For more information, call collect or write for a free brochure.

AIR AMBULANCE OF AMERICA

The Finest Care in the Air

Flight Operations (713) 494-7270 ★ Business Office (713) 777-4727
Memorial Hospital Professional Building ★ 7777 Southwest Freeway, Suite 510 ★ Houston, Texas 77081

Sen Moss says AMA has helped spotlight Medicaid fraud

The American Medical Association and state and local medical associations "have played a central role" in helping the Senate spotlight Medicaid fraud and abuse. The credit was given by Sen Frank Moss (D-Utah), Chairman of the Senate Aging Subcommittee that conducted the well-publicized investigations of "Medicaid Mills" in 1976.

The Senator also said "the number of physicians who cheat" is very small.

In a letter to Richard E. Palmer, MD, president of the AMA, Moss said the abuses highlighted in the subcommittee's report "exist for many reasons but AMA inaction isn't one of them."

The Senator said the subcommittee's criticism "was not directed at contemporary medical practice.

"It was directed at a growing aberration in our urban ghettos called the Medicaid 'Mill'. The culprits we identified are greedy businessmen and real estate speculators, the same people we found pyramiding nursing home mortgages in New York. Now they have found a new gravy train. They hire foreign-trained physicians (Moss includes podiatrists and chiropractors in the definition) and pressure them to see more and more patients in less and less time. The entrepeneurs keep from 50 to 70% of the money Medicaid pays to the foreign practitioner . . ."

Poor quality care results, Moss said. "It could hardly be otherwise given the low Medicaid rates, the great delays in payments, the often and arbitrary denials of payment as well as the all-encompassing pressure exerted on mill practitioners to grind patients through the mill. Little wonder reputable physicians avoid Medicaid practice. Even the best intentioned physician would have difficulty functioning in this kind of environment."

In Medicaid, the "ripoffs" are taken by the clinic owners who more often than not are not physicians, said Moss.

The number of providers who abuse the Medicaid system may be four percent of total Medicaid participating physicians (Moss includes chiropractors and podiatrists) or less than 2% of all physicians in the United States, he said.

Moss endorsed a statement by Dr Palmer that other providers have a far worse track record as far as cheating the system. "I would include, for example, nursing homes, pharmacies that specialize in welfare clientele, and clinical laboratories that do a high volume of Medicaid business."

TMA helps provide medical services for Texas Legislature

Emergency medical services are being provided to members of the Texas Legislature during the 65th Session by the Texas Academy of Family Physicians and the Texas Medical Association, with assistance from the Texas Department of Public Welfare and the Texas Department of Health Resources.

Warren T. Longmire, Jr., MD, Hitchcock, has secured volunteer physicians for each of the first 90 days of the session for the "Physician for the Day" program.

James M. Graham, MD, Austin, a member of the TMA Council on Medical Legislation, is serving as the admitting physician for those who require hospitalization.

The State Department of Public Welfare is providing a registered nurse for the program and the Texas Department of Health Resources is providing the equipment and supplies needed in the room in the Capitol.

Measles outbreaks will increase in the next five years

The Center for Disease Control recognizes measles (rubeola) as being second only to influenza as the most important "immunizable" disease.

In Texas the number of reported cases of measles for 1974 was 212, while it rose to 275 in 1975.

In 1976 the incidence of measles has doubled in twenty-five states as compared in 1975. The 1975 incidence significantly increased over 1974.

Because the immunization levels are declining in many schools, measles activity will continue to increase, says the Texas Department of Health Resources. It is probable that measles outbreaks, notably in high schools and colleges, will occur over the next 4-5 years, the department predicts.

The department requests early information about any epidemic situations.

National immunization program halted

Federal health officials have halted the national immunization program citing "evidence of association between influenza vaccinations and the Guillain-Barre syndrome."

The $35 million federal program began in October, 1976.

A 13-member Advisory Committee on Immunization Practice meeting in Atlanta, Ga, voted to maintain the moratorium on public flu vaccinations because of evidence they are linked to an unusual form of paralysis, Guillan-Barre syndrome.

David Sencer, MD, director of the Center for Disease Control, reported the committee's findings. He said a detailed questionnaire was circulated to physicians and health departments around the country to get more detailed information on the paralysis.

The national Center for Disease Control said there have been 1,600 cases of persons having non-fatal reactions to the swine influenza vaccine, and of the 41 million persons who have received the swine flu vaccine, 160 have died, some within minutes of their vaccination.

Califano is new Secretary of Health, Education, and Welfare

Washington lawyer, Joseph Califano, Jr., one of Lyndon Johnson's top "Great Society" architects, has been named Secretary of the Health, Education and Welfare Department.

The 45-year-old native of Brooklyn is regarded as one of the Capitol's brightest men. He knows most of the Congressmen of importance to HEW, and he knows most of the programs—many of them established during the "Great Society" days—that he will now administer.

The appointment of Califano to the politically sensitive position was the final cabinet selection by Carter. Liberals, including Ralph Nader, saw in Califano's "Great Society" background a promise of a bigger and better "Great Society"; conservatives found reassurance in Califano's reputation as a steady political veteran who is interested in cutting down on waste and inefficiency.

Most of Califano's efforts on behalf of Johnson as the President's chief domestic adviser in the mid-1960's was in the welfare and education areas rather than health.

In a speech last summer, Califano said a new President will have a tough time coping with the entrenched bureaucracy. "The departments and agencies of the federal executive are a minefield of bureaucratic interests jealous of their jurisdictional turf," he said. The programs and their constituencies outside government "will be poised to oppose any change in the status quo."

Califano was first attracted to Washington with the election of John Kennedy. He joined the Defense Department where he quickly became one of Defense Secretary Robert McNamara's "Whiz Kids". Lyndon Johnson asked him to come to the White House to serve as his domestic aide. There he was known as a driving, tough negotiator between labor and management over wage-price guidelines. He was interested in a systems-analysis approach to budgeting federal agencies which should mesh with Carter's enthusiasm for "zero-based" budgeting.

School of Public Health moves into new quarters

The University of Texas Health Science Center at Houston (UTHSC) has moved its School of Public Health into new quarters, an 11-story, $10 million building at 6905 Bertner.

The newly constructed facility is just south of the two-story building which has housed the School of Public Health since 1970 and which will now become headquarters for the UTHSC Graduate School of Biomedical Sciences.

Family practice residencies increase to more than 300

More than 300 family practice residencies are operating in university medical centers and other teaching hospitals in the United States, reports the American Academy of Family Physicians.

Sixteen new family practice programs, from New York to Colorado, recently were approved by the Liaison Committee on Graduate Medical Education, bringing the total to 303.

The 303 residencies are training more than 4,600 residents, with the U.S. graduate first year fill-rate running at more than 90%. The American Academy of Family Physicians projects that more than 340 training programs will be in operation by the end of 1977.

The goal is to have one-fourth of all medical school graduates entering family practice residencies by 1980.

20/150 H

20/100 EAR

20/70 ING IS

20/50 AS PRECIOUS

20/40 AS SIGHT HAV

20/30 YOU HAD YOUR HE

20/20 TESTED LATELY A SI

20/15 COMFORTABLE HEARING

20/10 INVESTMENT OF A FEW MIN

Hearing losses are among the most consistently neglected health problems. Many people with them won't even admit it to themselves, let alone others. A little encouragement may start them thinking about themselves more realistically.

That's why we're offering you the poster shown here. You can hang it on the wall or stand it on a small table. It comes with booklets called "As precious as sight" that give your patients some basic facts about auditory testing and hearing losses and how easy they are to correct in many cases.

Write to us for your free poster and booklets. They just might help you to help some patients who aren't hearing as well as they used to. Even those who ordinarily wouldn't hear of it.

Professional Relations Division, Beltone Electronics Corporation
4201 West Victoria Street, Chicago, Illinois 60646, an American company

Beltone
WHEN A HEARING AID WILL HELP

Lidov

When choosing a diuretic for day-in-day-out hypertension control with comfortable compliance...

The agent you choose in mild to moderate essential hypertension should offer (1) long-term effectiveness, (2) patient comfort and compliance.

Zaroxolyn offers both.

In one long-term study[1] Zaroxolyn brought moderately elevated (average 161/109 mm Hg) blood pressure down to the range of normotension—and held it there for a year or more.

The investigator noted, "Patient cooperation was surprisingly good for a study of such duration [2½ years]. The once-daily dosage schedule with metolazone [Zaroxolyn] no doubt contributed to patient compliance."

Overall compliance with Zaroxolyn is good—very good. An analysis of controlled clinical studies involving 188 Zaroxolyn patients showed that only eight discontinued therapy because of side effects. That's a discontinuation rate of only 4.3%, and broader clinical experience appears to substantiate this low rate[2]

Zaroxolyn. For long-term control and comfortable compliance in mild to moderate hypertension.

Recommended initial dosage in mild to moderate essential hypertension–2½ to 5 mg once daily

Zaroxolyn®

(metolazone, Pennwalt)

2½-mg, 5-mg and 10-mg tablets

once-daily antihypertensive diuretic

Before prescribing, see complete prescribing information in the package insert, or in PDR, or available from your Pennwalt representative. The following is a brief summary. **Indications:** Zaroxolyn (metolazone) is an antihypertensive diuretic indicated for the management of mild to moderate essential hypertension as sole therapeutic agent and in the more severe forms of hypertension in conjunction with other antihypertensive agents. Also, edema associated with heart failure and renal disease. **Contraindications:** Anuria, hepatic coma or precoma; allergy or sensitivity to Zaroxolyn. Or, as a routine in otherwise healthy pregnant women. **Warnings:** In theory cross-allergy may occur in patients allergic to sulfonamide-derived drugs, thiazides or quinethazone. Hypokalemia may occur, and is a particular hazard in digitalized patients; dangerous or fatal arrhythmias may occur. Azotemia and hyperuricemia may be noted or precipitated. Considerable potentiation may occur when given concurrently with furosemide. When used concurrently with other antihypertensives, the dosage of the other agents should be reduced. Use with potassium-sparing diuretics may cause potassium retention and hyperkalemia. Administration to women of childbearing age requires that potential benefits be weighed against possible hazards to the fetus. Zaroxolyn appears in the breast milk. Not for pediatric use. **Precautions:** Perform periodic examination of serum electrolytes, BUN, uric acid, and glucose. Observe patients for signs of fluid or electrolyte imbalance. These determinations are particularly important when there is excessive vomiting or diarrhea, or when parenteral fluids are administered. Patients treated with diuretics or corticosteroids are susceptible to potassium depletion. Caution should be observed when administering to patients with gout or hyperuricemia or those with severely impaired renal function. Hyperglycemia and glycosuria may occur in latent diabetes. Chloride deficit and hypochloremic alkalosis may occur. Orthostatic hypotension may occur. Dilutional hyponatremia may occur in edematous patients in hot weather. **Adverse Reactions:** Constipation, nausea, vomiting, anorexia, diarrhea, bloating, epigastric distress, intrahepatic cholestatic jaundice, hepatitis, syncope, dizziness, drowsiness, vertigo, headache, orthostatic hypotension, excessive volume depletion, hemoconcentration, venous thrombosis, palpitation, chest pain, leukopenia, urticaria, other skin rashes, dryness of mouth, hypokalemia, hyponatremia, hypochloremia, hypochloremic alkalosis, hyperuricemia, hyperglycemia, glycosuria, raised BUN or creatinine, fatigue, muscle cramps or spasm, weakness, restlessness, chills, and acute gouty attacks. **Usual Initial Once-Daily Dosages:** mild to moderate essential hypertension—2½ to 5 mg; edema of cardiac failure—5 to 10 mg, edema of renal disease—5 to 20 mg. Dosage adjustment may be necessary during the course of therapy. **How Supplied:** Tablets, 2½, 5 and 10 mg.

References:

1. Dornfeld L, Kane R: Metolazone in essential hypertension: The long-term clinical efficacy of a new diuretic. *Curr Ther Res* **18:** 527-533, 1975
2. Data on file, Medical Department, Pennwalt Prescription Products

PENNWALT

Pennwalt Prescription Products
Pharmaceutical Division
Pennwalt Corporation
Rochester, New York 14603

DYAZIDE®

Trademark

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE FOR LONG-TERM CONTROL OF HYPERTENSION*

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* WARNING
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the fixed combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium-sparing action of its 'Dyrenium' component is warranted.

Contraindications: Further use in progressive renal or hepatic dysfunction; hyperkalemia. Preexisting elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs. Routine use of diuretics in otherwise healthy pregnancy.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in severely ill patients with urine volume less than one liter/day, the elderly or diabetics, with suspected or confirmed renal insufficiency. Periodic determinations of serum K^+ should be made. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **The presence of a widened QRS complex or arrhythmia in association with hyperkalemia requires prompt additional therapy.** Thiazides are reported to cross the placental barrier and appear in breast milk; fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and other adverse reactions that have occurred in the adult may result. When used in pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics, or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium® (triamterene, SK&F Co.), and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Do periodic blood studies in cirrhotics to check for nondrug-related variations in blood pictures, and in patients with folic acid depletion, since 'Dyrenium' may contribute to appearance of megaloblastosis. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

SK&F CO., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

Tech medical school opens Shallowater Clinic

Residents of Shallowater, Tex, now have health care in their own city for the first time at the Shallowater Clinic, Inc., operated by the Department of Family Practice of the Texas Tech University School of Medicine.

The clinic provides primary medical care to the community and surrounding area, allows medical students to become familiar with health care delivery in a rural setting, and offers resident physicians the opportunity to learn personnel and clinic management, said Thomas Nicholas, MD, chairperson of Family Practice at Tech.

The facility is staffed by two registered nurses, three clerical assistants, one full-time and three part-time physicians from the Tech Family Practice faculty, and five resident physicians from the Tech Family Practice Residency program.

Senior medical students will serve clinical rotations in the clinic, and freshman medical students will visit the facility as observers.

"Experience in this setting may encourage residents to select a rural setting for their own practices. This would help alleviate the need for physicians in rural areas," Dr Nicholas said.

Job-related deaths decline in 1975

Job-related deaths, injuries, and illnesses declined in 1975 according to the Bureau of Labor Statistics.

Deputy Assistant Secretary of Labor Bert Concklin, of the Department's Occupational Safety and Health Administration (OSHA), said the reductions show that declines in earlier years are part of a national trend downward.

Data in industries surveyed in 1974 and 1975 shows a 10% drop in job-related fatalities from 5,900 to 5,300. Occupational injuries, declined by 16%, from 5.7 million in 1974 to 4.8 million in 1975.

Recognized occupational illnesses were estimated to total 163,300 for 1975 compared with 200,400 for 1974.

Injury incidence rates, as well as the number of injuries, declined for all major industry divisions, except mining.

The number of recordable deaths, injuries, and illnesses per 100 full time workers dropped from 10.4 in 1974 to 9.1 in 1975.

Dallas team studies antibiotic effects in children

A scientific team from The University of Texas Southwestern Medical School in Dallas is conducting a broad study on the effects of antibiotics in infants and children. The John A. Hartford Foundation, Inc provided a $131,826 grant for the project.

George H. McCracken Jr., MD, professor of pediatrics is directing the studies that will monitor the susceptibility to antibiotics of various disease-causing bacteria collected from newborn infants in various regions of North and South America.

"Antibiotics are the most frequent class of prescription drugs administered to infants and children," Dr McCracken said. A number of therapeutic disasters have resulted from giving infants antibiotics on the basis of extrapolated data from adults, he said.

The object of the studies is to obtain pharmacologic data to formulate safe and effective specific dosage schedules in treatment of pediatric infectious disease.

TMA will sponsor 1977 conference for county medical society executives

The Texas Medical Association will sponsor a 1977 Conference for County Medical Society Executives during April or May.

The conference will update executives on key issues and communicate on business related to membership.

The conference will be the fourth sponsored by TMA. It will provide county medical society executives and staff with opportunities to discuss administration, dues processing, member services, communications, and meetings.

Medicaid outlines claims filing deadlines

The Texas Medicaid Program requires an eligible provider to furnish a full statement of charges for procedures or supplies to a recipient within 90 days of service, reports Louis W. Conradt, MD, vice president and medical director of the Medicaid program of the Texas Department of Public Welfare.

Other claim filing deadlines include a notice of hospital admission within 30 days from the admission date and inpatient hospital billing within 90 days from the discharge date.

Claim filing deadlines for physician, outpatient hospital, home health agency, family planning agency, eyeglass program, and ambulance services are due within 90 days from the date of service.

There are several exceptions to claims filing deadlines. For Medicare related claims, the provider should apply Medicare filing deadlines or file within 90 days from the date of Medicare rejection, if the recipient is rejected on the basis of ineligibility for Medicare benefits.

For new providers, the 90 day filing period starts on the effective date of the provider's certification if the date of approval is retroactive.

In Medical eligibility issues, where the medical effective date, such as in retroactive coverage, does not correspond to the date the program case number was issued by the Texas Department of Public Welfare, the date of the program case number will be the date used for filing deadlines.

Panel recommends hospital bed reduction

A National Academy of Sciences panel has called for a 10% decrease in ratio of hospital beds to population.

Claiming that a surplus of short-term general care beds is contributing to higher medical costs, the panel recommended a national health planning goal to reduce the present ratio of 4.4 beds per 1,000 persons to 4.0 by 1981.

The recommendation could be accomplished by curtailing hospital construction and closing some existing hospital facilities, the panel said.

The report, sponsored by the academy's Institute of Medicine, says powerful community interests usually favor the building of a new hospital or expanding of an existing one, and oppose the curtailment of services in an existing hospital, regardless of occupancy rates or other measures of efficiency.

The panel recommended waiting periods for elective surgery as a way to increase hospital efficiency and improve bed/occupancy rates.

The report also recommends shifting from the present system of retrospective cost reimbursement to a prospective rate-setting system.

According to the committee, inadequate insurance coverage for care outside the hospital is creating strong incentives for using more expensive hospital beds. The panel quotes estimates on the cost of maintaining unused hospital beds at 50% of the cost of occupied beds.

Bryan Williams, MD, Associate Dean for Student Affairs and a Professor of Medicine at the University of Texas Southwestern Medical School in Dallas, was a member of the 12-man panel.

Cancer institute studies vaginal cancer

The National Cancer Institute is supporting a study of vaginal cancer and other noncancerous genital tract irregularities in offspring of mothers who received synthetic estrogens during pregnancy.

The study seeks to provide answers concerning the risk to exposed offspring born after 1940 of developing cancer, or other medically important conditions, including vaginal adenosis and cervical abnormalities.

A pamphlet, *Information for Physicians—DES Exposure In Utero,* has been compiled by the physicians of the project's Professional and Public Relations Subcommittee, and edited by the Office of Cancer Communications of the National Cancer Institute. The pamphlet lists DES-type drugs that may have been prescribed to pregnant women, and includes a bibliography.

The pamphlet is available at no cost from the National Cancer Institute's Office of Cancer Communications, Bethesda, Maryland, 20014.

ANNOUNCING **Practice Productivity Inc.** WORKSHOP

Business Essentials for a Medical Office

one-day workshop for your medical office assistants

9 AM to 5 PM

February 15, 1977	Austin	Sheraton-Crest Inn
February 16, 1977	Dallas	Fairmont Hotel
February 17, 1977	Fort Worth	Kahler Green Oaks Inn
February 22, 1977	Houston	Houston Oaks Hotel
February 23, 1977	Corpus Christi	Hilton Inn
February 24, 1977	San Antonio	La Mansion Hotel
March 1, 1977	El Paso	Holiday Inn-Airport
March 3, 1977	Lubbock	Hilton Inn

TOPICS: Telephone Management, Appointment Scheduling, Medical Records, Personnel, Billing Systems and Collection, Insurance Claim Processing.

Practice Productivity Inc. is a national management consulting firm located in Atlanta. Physician-clients are engaged in the private practice of medicine. Practice Productivity offers educational and motivational workshops in sound business concepts to physicians, medical office managers, and medical assistants. It also provides in-depth, on-premise consulting to physicians.

For further information, contact Duane M. Johnson, Ph.D., Executive Vice-President, Practice Productivity Inc., Telephone 404/455-7344, or toll free Registration Desk 800/241-6228.

Registration Form

Please register the following persons (type or print)

Name	Position	Date Will Attend
1.		
2.		
3.		
4.		

From the office of:

Name_____ Specialty_____ Telephone:(_____)_____

Address_____ City_____ State_____ Zip_____

Full tuition fee of $_____ is enclosed at $60 per registrant. Tuition includes course materials and luncheon and MUST ACCOMPANY THIS FORM. (There is a $10 handling fee deducted on all refunds for cancellations received at least one week in advance of course; no refund thereafter.)

Make check payable and mail to:

Practice Productivity Inc. 2000 Clearview Avenue, Atlanta, Georgia 30340

Controlling medical cost is goal of government health plan

The government's new five-year health plan, "Forward Plan for Health," places top priority on controlling increasing medical costs. The plan represents the U.S. Public Health Service's blueprint for tackling major health problems during 1978-1982.

The plan suggests consolidating and integrating health care programs, using new consumer health education methods to modify individual behavior, and maximizing third party reimbursement.

Theodore Cooper, MD, former assistant secretary for health in the Department of Health, Education, and Welfare, said the major concern is health care costs, which rose 300% during the last decade to $118.5 billion last year.

The new five-year plan, the third in a series, proposes a "major attack on cost escalation as the factor now driving national health policy." The plan emphasizes the greater use of preventative services including improved quality of care, more research on medical malpractice, and a public immunization program.

The report concludes that malpractice insurance adds up to $15 per bed each day to hospital rates and $2 billion to national health care costs.

Changes are being considered in Medicare and Medicaid payment policies and benefits, the report states. Changes include requiring increasing Medicare coverage for outpatient mental health treatment, and requiring all state Medicaid programs to cover clinic services.

The document also said the government will make available to most pregnant women over 36 a test which can reduce genetically related death and disease. The "Forward Plan for Health" can be ordered from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402.

Welfare board creates task force on spending

The Texas State Welfare Board has created a "blue ribbon task force" to seek ways of containing and reducing the $700 million a year it pays doctors, hospitals, and nursing homes for health care.

The task force will compile a report for the 1977 Texas Legislature. The task force includes health care providers and recipients; businessmen; and appointees of Gov Dolph Briscoe, Lt Gov Bill Hobby, and Speaker Bill Clayton. Welfare Commissioner Raymond W. Vowell proposed the task force to the board at its November meeting.

"Cost containment becomes the department's first priority, remembering that health concerns represent 63% of the proposed Department of Public Welfare budget in 1978 and 64% in 1979," Vowell said.

"But, while cost containment is constantly being practiced, the department feels a penetrating study must be done of what exactly we can afford to do to provide adequate health care to eligible recipients and yet stay within the mandates of federal regulations and the limitations of state funds," Vowell said.

Total Actual and Projected Expenditures for Medical Services for Fiscal Years 1974 through 1979 for Texas Department of Public Welfare

1974	$448,284,181
1975	$534,456,059
1976	$606,426,320
1977	$733,801,998
1978	$880,809,060
1979	$963,098,407

*Source Texas Department of Public Welfare

Coordinating Board reports $166.6 million in 1975 research funds

Texas colleges and universities received $166.6 million from federal and state sources for research in 1975, an increase of 13.8% over the previous year, reports the Coordinating Board, Texas College and University System.

A survey of research at state-supported institutions of higher learning in 1975-1976 shows that of the total amount of research dollars, 56.8% was from federal funds and 23.8% was from state sources.

"State funds appropriated for research is one of the best investments the state makes," said Kenneth H. Ashworth, Commissioner of Higher Education. "Last year the state invested approximately $40 million in seed money and got back four times that much." The increasing amount of funds, Ashworth said, is indicative of the quality of research being conducted in Texas.

Basic research in the state is aimed at development of new energy resources, stabilization of the economy, protection of the environment, and finding a cure for cancer. In the past, basic engineering research in Texas on pumps aided in making possible today's open heart surgery.

Of the research dollars available to the state last year, 66.7% went to public senior colleges and universities, and 33.3% went to medical, dental, and health-related units.

Cancer research received the heaviest funding in medical institutions. Over the past four years, the federal government's share of funds for research has risen steadily with the state's portion dropping substantially, more than five percentage points.

Latest nationwide figures on research, for fiscal year 1975, were recently released by the National Science Foundation. The federal government spent $4.5 billion in fiscal 1975 to fund research at colleges and universities, and only five Texas institutions ranked in the top 100 colleges and universities.

The University of Texas at Austin ranked 36th in the nation, receiving $28.6 million in federal funds. Texas A&M University was 46th with $23.3 million, and Baylor College of Medicine was 50th with $22.3 million. The University of Texas Health Science Center at Dallas was 76th with $15.6 million, and The University of Texas M.D. Anderson Hospital and Tumor Institute was 78th with $15.6 million.

Houston school opens Hemophilia Diagnostic and Treatment Center

The University of Texas Health Science Center at Houston has established the Gulf States Hemophilia Diagnostic and Treatment Center in the University of Texas Medical School and Hermann Hospital. Ronald S. Weinger, MD, is the project director.

The first year grant is $125,000, for the one of 17 centers throughout the United States funded by the Department of Health, Education, and Welfare.

The center is to provide information and consultation to physicians caring for patients with hemophilia and related disorders, and to determine the incidence and morbidity of these conditions in the east Texas area.

Physicians may call 713-792-4830 for information and consultation arrangements.

Survey shows doctor's image with patients deteriorating

How's the doctor's image with patients today? Deteriorating, according to a Patient Attitude Survey of *Medical Economics Magazine*.

In answer to the question, "Do you believe the average doctor (a) is dedicated to helping people more than anything else? or (b) sees medicine chiefly as a business?", of the 1,759 respondents, 52% picked (a). In the magazine's 1969 survey, 86% answered (a) to an identical question.

Results of the survey also show that patients believe doctors should be required to pass tests periodically to have medical licenses renewed, but don't believe the government should regulate all fees charged by doctors, or that government should regulate where doctors are allowed to practice.

A majority of the respondents feel that doctors are committing no more malpractice today than ten years ago. A majority said their doctor's losing a malpractice suit would not alter their opinion of him. Those surveyed placed the pri-

mary blame for today's medical malpractice problem on lawyers.

Seventy-one percent of those surveyed said their own doctor's annual income was about right, 24% said it was too much, and five percent said it was too little.

Twenty-seven percent of those surveyed felt the fees their doctor charges are too high, 70% said the charges are about right and three percent said the fees are low.

UT receives grant to study Parkinson's disease treatment

The University of Texas College of Pharmacy has received a $166,000 grant from the National Institutes of Health to continue study of a drug which may be useful in treating Parkinson's disease.

Dr. Robert V. Smith, associate professor of pharmaceutical chemistry and assistant director of the UT Drug Dynamics Institute, is principal investigator for the study, which is titled "Metabolism of Apomorphine and Its Analogs."

The grant is a three-year renewal of an earlier award for the research. Parkinson's disease afflicts approximately 250,000 persons in the United States.

CE directory introduces new courses and report form

The 1977 Texas Continuing Education Directory for Physicians introduces two new features, listings of courses to be held in conjunction with Texas Medical Association's 1977 Annual Session, and a form on which physicians may record continuing education activities throughout the year.

The directory includes 43 Annual Session courses. These combine to offer 241 Category I hours toward the American Medical Association's Physician's Recognition Award. Two Annual Session courses qualify for American Academy of Family Physicians (AAFP) prescribed credit, and the remaining courses qualify for AAFP elective credit. The Annual Session is in Houston, May 11-15, 1977.

The continuing education record form provides space for physicians to register a description of each learning activity, dates of attendance, type of accreditation, sponsors, location, and credit hours.

The directory, which was mailed to TMA members in January, lists a total of 152 courses, 33 regularly scheduled seminars, and 40 meetings of medical organizations scheduled in Texas this year.

Investment performance for TMA Members' Retirement Plan and Trust

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1976 Through 12/30	3 Years Ended 12/31/75	5 Years Ended 12/31/75	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	+17.5%	—33.0%	— 6.2%	1.4%
Loomis-Sayles Mutual Fund	+12.3%	—21.0%	— 3.7%	3.1%
Mercantile Bank Equity Fund	+18.4%	—35.8%	—16.5%	3.6%
Mercantile Bank Fixed Income Fund	+ 9.8%	—13.5%	— 8.6%	7.4%
T Rowe Price Growth Stock Fund	+10.5%	—34.1%	— 1.9%	2.1%
T Rowe Price New Income Fund	+ 5.9%	N/A	N/A	7.6%
Stein Roe & Farnham Balanced Fund	+11.4%	—24.9%	+ 4.1%	3.0%
Standard & Poor 500 Stock Average	+19.2%	—30.9%	— 2.1%	
Dow Jones Industrial Average	+17.9%	—16.4%	+ 1.6%	

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

AUSTIN: MEDICAL LEGISLATION INTRODUCED. The following bills have been introduced for consideration during the 65th Texas Legislature. The Medical Liability and Insurance Improvement Act of Texas was pre-filed in the House as House Bill (HB) 370 by Rep Pike Powers, Beaumont, and in the Senate as Senate Bill (SB) 103 by Sen Ray Farabee, Wichita Falls. Sen Lloyd Doggett, Austin, has introduced SB 17 concerning regulation of fraudulent cancer treatment, while Rep Samuel W. Hudson, Dallas, has introduced HB 215 which implements family planning services. Rep Mickey Leland, Houston, has introduced HB 12 which requires drug detail men to be pharmacists, HB 13 concerning prescription filing by Medicaid patients, and HB 21 permitting optometrists to use diagnostic drugs. Rep Anthony Hall, Houston, has introduced HB 109 regarding hospital districts and county districts' right to reimbursement from nonresidents. Rep Jim Clark, Pasadena, has introduced HB 49 which adds coverage for alcoholism to accident and health policies. Rep Abraham Ribak, San Antonio, has introduced HB 138 which creates the Professions Malpractice Board. Rep Fred Head, Troup, introduced several bills including HB 6 which requires medical schools to provide 20% of the positions for students who are obligated to family practice in rural or underserved Texas areas for not less than four years, HB 225 which dictates that no residency program funded by the state can admit out-of-state students unless there are no Texas applications, HB 227 that amends the Fifth Pathway program to remove the qualifying exam prior to admission in the program, HB 228 that amends the state student loan program to permit loans to Texas residents attending medical schools outside the United States, and HB 5 creating a new medical schol in Tyler. Rep Doyle Willis, Fort Worth, introduced HB 44, that creates new medical schools in Fort Worth and the Rio Grande Valley. Several bills concerning mandatory drug substitution by pharmacists have been introduced by Rep Leland, Sen Chet Brooks, Pasadena, and Sen Doggett.

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber, Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

WASHINGTON: HOUSE HEALTH LEADERSHIP. Rep Dan Rostenkowski (D-Ill), chairman of the House Ways and Means Subcommittee on Health, has emerged from organizational wars of the 95th Congress with additional clout. Rep Rostenkowski, an active supporter of House Majority Leader Rep Jim Wright (D-Tex), has been named deputy whip. Rep John Brademas (D-Ind) was appointed whip. Rep Rostenkowski is now in excellent position to help maneuver health legislation designed by his subcommittee through the House. Included will be early work on legislation to decrease Medicare-Medicaid fraud and abuse and formulate national health insurance proposals.

AUSTIN: 65th LEGISLATURE. The 65th Texas Legislature includes 18 Republicans and 132 Democrats. There are ten women in the House and 38 new members. Fewer lawyers are in the legislature. The Senate has 21 lawyers, while the House of Representatives includes 45 lawyers. Although many past legislatures have had lawyers in top positions, Gov Dolph Briscoe, Lt Gov Bill Hobby and Speaker of the House Bill Clayton are not attorneys.

AUSTIN: ISO RATE FILING DENIED. The State Board of Insurance of Texas has denied the rate filing applications of the ISO, an insurance rating bureau, on

excess factor rates in Texas. The rates would have increased the excess factor formula an average of 100%.

WASHINGTON: HEW LOSES LEGAL CHALLENGE TO LOCAL PLANNING AGENCY. The Department of Health, Education, and Welfare (HEW) lost its winning court record on the health planning law in December when it lost a court decision on a lawsuit attacking the method of selection for planning areas in the Philadelphia area. US District Court Judge Scott ruled that HEW had split the Philadelphia area into three health planning areas illegally after it had originally decided that one would be suitable. The lawsuit was brought by a rejected planning agency applicant after it found the area it had applied to serve later was split by HEW at the request of Pennsylvania Gov Milton Schapp. HEW and its codefendant in the case, the City of Philadelphia, are considering appeal. Other pending lawsuits against the HEW challenge the representativeness of the governing boards of local planning agencies. Other suits, including a lawsuit filed by North Carolina and joined by the AMA, test the constitutionality of the 1974 planning law.

WASHINGTON: NATIONAL HEALTH INSURANCE SURVEY. Results of a survey of physicians by the HEW/HRA, the national center for health services research, show 56% of the doctors surveyed favor some form of national health insurance and 75% of doctors surveyed favor peer review under national health insurance programs.

ALABAMA: ALABAMA HSA CASE DISMISSED IN FEDERAL COURT. A complaint that the inclusion of an Alabama county in a health system service area comprised chiefly of large areas of Georgia was an invasion of Alabama's sovereignty has been dismissed in favor of the Department of Health, Education, and Welfare. The complaint was brought against former HEW Secretary David Mathews by Alabama Gov George C. Wallace last April after Alabama and Georgia failed to agree that the interstate standard metropolitan statistical area around Columbus, Ga, should be split.

WASHINGTON: CERTIFICATE OF NEED REGULATIONS. The Deparment of Health, Education, and Welfare (HEW) certificate of need regulations, which outline the minimum requirements for state programs, are near final publication. HEW made no attempt to include physician's offices, an item strongly opposed by the American Medical Association.

CONNECTICUT: YALE RAPS LAW. Yale University Medical School may refuse to accept transfers from foreign medical schools despite specific requirements of the Health Education Act approved by Congress. Should the school refuse to comply, it could lose $1.5 million in federal capitation grants and other aid. The law requires the school to reserve places for American students transferring from foreign schools after completing two years of study and passing Part I of the National Board of Medical Examiner's examination. The federal law was called "outrageous, federal intrusion of academic self-determination" by Yale president Kingman Brewster, Jr. Brewster claimed the law would single out benefits for students who could not meet the criteria for admission to US schools. The university is now debating the question of compliance.

WASHINGTON: HEALTH CARE SPENDING. The Social Security Administration estimates that health care spending in the United States in 1976 was $139.3 billion, a 14% increase over the revised estimate of $122.2 billion for 1975. The per capita expenditure for health care for 1976 is $638. The 1976 figure includes $59 billion in public spending, $40 billion in federal funds, and $19 billion from state and local sources.

WASHINGTON: MALPRACTICE. The new president of the Health Insurance Association of America, Robert F. Froehlke, has urged a change in the basis for malpractice lawsuits. The new president said malpractice cases add between $4 and $6 billion to the nation's health care cost. He charges that the present tort concept is responsible for many problems facing health insurance firms. He called for an updating of the tort system, radical reductions in the statutes of limiations, a limit on recovery of general and punitive damages, and reduction but not abolition of the contingent fee system of attorneys as the size of awards increases.

WASHINGTON: HEALTH MANPOWER LAW. The American Hospital Association (AHA) is urging that in administering the new health manpower education law, the Department of Health, Education, and Welfare recognize the Educational Commission for Foreign Medical Graduates examination as an equivalent to the test administered by the National Board of Medical Examiners. The AHA points out that under the new law foreign medical graduates entering the United States after January 1, 1977, must pass parts one and two of the National Board of Medical Examiners' exam, but the test is not offered outside the United States, and the foreign medical graduates cannot get visas to enter the United States unless they have passed the test.

WASHINGTON: KENNEDY CONSIDERS POSSIBLE JUDICIARY ANTITRUST CHAIR. Sen Edward M. Kennedy (D-Mass) is actively considering adoption of another powerful subcommittee chairmanship besides the Labor Committee Health Panel he now heads. Although he has not made a decision, Kennedy is asking aides and associates if they think he should bid to replace the late Sen Philip Hart as Chairman of the Judiciary Committee Subcommittee on Antitrust and Monopoly.

WASHINGTON: 1977 HEW APPROPRIATIONS. The Department of Health, Education, and Welfare appropriations for fiscal year 1977, enacted over a presidential veto, contain $125 million for programs of the Bureau of Health Planning and Resources Development. The Bureau plans to allocate $97 million for health systems agencies, $19.5 million for operation of state health planning and development agencies, $6.5 million for planning methods and technical assistance, and $2 million for rate regulation projects. Because of the increased funding level for fiscal year 1977, HEW is considering increasing the minimum grant for all health systems agencies to $175,000. If the minimum level is raised, all health systems agencies will receive more funds than they did in fiscal year 1976. Those serving populations more than 450,000 will get more than the $175,000 minimum. The overall average per capita funding for agencies above the minimum levels will be about 40 cents. Funding was 28 cents per capita in fiscal year 1976.

ATTENTION PHYSICIANS

If you are interested in joining a major Primary Care Group Practice in Houston or Dallas . . . the I*CARE Program is the answer.

I*CARE, INC. is currently constructing five Primary Care Clinics in Houston and Dallas with exceptional Physician opportunities:

*Guaranteed Base Salary *No Overhead
*Percent of Revenue *Shared Call
*Paid Professional Liability Insurance
*Peer Group Practice . . . and more

Interested Physicians Please Contact:

Stephen C. Smith
I*CARE, INC.
10910 Katy Road
Houston, Texas 77043
(713) 932-1111

Bank Financing for Physicians

We specialize in equipment leasing and financing, unsecured loans and lines of credit to Physicians And we handle it all by mail.

Unsecured loans with optional dollar amounts (to $10,000), optional payment schedules. Equipment leasing to give you tax advantages, restore operating capital, convert unused depreciation to cash. And lines of credit to provide for future cash needs.

We charge tax deductible bank rates. You won't spend any of your valuable time at your bank, and you'll reserve your regular bank credit for times when you really need it.

For further information, complete and mail this coupon today. I want to know more about:

— Unsecured Loans — Sale & Lease Back Plans
— A Line of Credit — Lease-Purchase Plans
— Equipment Leasing — Equipment Financing
— Other: _____

Dr. _____ Phone _____
Address _____
City _____ State _____ Zip _____

Professional Services Division
TEXAS BANK AND TRUST COMPANY
P. O. Box 101 Jacksonville, Texas 75766

BRIEF SUMMARY OF
PRESCRIBING INFORMATION
ANTIMINTH® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

One swallow does it

eliminates Pinworms and Roundworms with a single dose

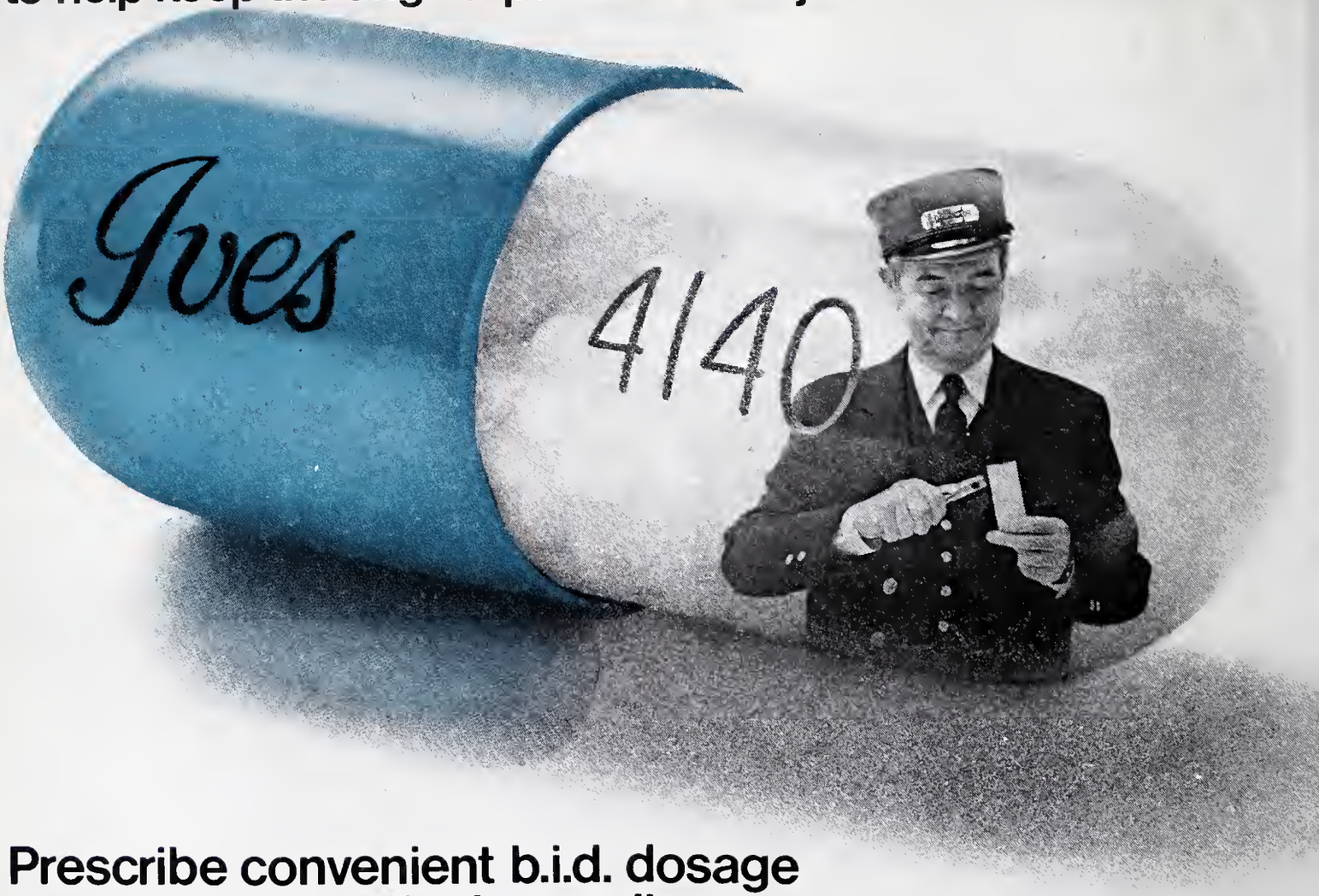
- **Single dose effectiveness against both pinworms and roundworms**—The only single-dose anthelmintic effective against pinworms *and* roundworms.
- **Nonstaining**—to oral mucosa, stomach contents, stools, clothing or linen.
- **Well tolerated**—the most frequently encountered adverse reactions are related to the gastrointestinal tract.
- **Economical**—a single prescription will treat the whole family.
- **Highly acceptable**—pleasant-tasting caramel flavor.
- **Convenient**—just 1 tsp. for every 50 lbs. of body weight. May be taken without regard to meals or time of day.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Please see prescribing information on facing page. NSN 6505-00-148-6967

Antiminth® ORAL SUSPENSION
(pyrantel pamoate) equivalent to 50mg pyrantel/ml

to help keep the angina* patient on the job



Prescribe convenient b.i.d. dosage to encourage patient compliance

ISORDIL® TEMBIDS® CAPSULES

(isosorbide dinitrate)

SUSTAINED ACTION CAPSULES, 40 mg

- designed specifically to provide 8 to 10 hours of sustained prophylaxis against angina pectoris attacks
- b.i.d. dosage is frequently satisfactory to prevent angina attacks... dosage range: 1 capsule b.i.d. to q.i.d.
- stable... retains potency without significant loss or variation

*Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:
"Possibly" effective: When taken by the oral route, Isordil is indicated for the relief of angina pectoris (pain of coronary artery disease). It is not intended to abort the acute anginal episode, but is widely regarded as useful in the prophylactic treatment of angina pectoris.
Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.

Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.

Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

Dosage: Every 6 to 12 hours according to need.

Consult direction circular before prescribing.

May we send you reprints, detailed information and/or professional samples?

TEMBIDS®—TRADEMARK FOR SUSTAINED ACTION CAPSULES

IVES LABORATORIES INC.
New York, N.Y. 10017
DEDICATED TO IMPROVING THE QUALITY OF LIFE THROUGH MEDICINE®

CONTINUING EDUCATION COURSES

FEBRUARY

Arthritis and Rheumatism

Title: Current Methods of Diagnosis and Treatment of Arthritis and Rheumatic Diseases
Location of Course: Marriott Motor Hotel, Houston
Date: Feb 5, 1977
Duration: 6 total course hours
Credit: Category I, AMA Physician's Recognition Award
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Chest Disease

Title: Practical Workshop in Pulmonary Disease
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Feb 18-20, 1977
Duration: Continuous; 17 total course hours
Fee: Laboratory session (Feb 18), $40; Clinical sessions (Feb 19-20), $110; Complete workshop, $150
Designed For: General practitioners
Enrollment: Laboratory session: Maximum, 50. Clinical sessions: Maximum, 120
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Lecture, open question, seminar
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Family Practice

Title: Seminar on Pediatric Care
Sponsor: East Texas Chapter, Texas Academy of Family Practice
Location of Course: Science Hall, Panola Junior College, Carthage
Date: Feb 2, 1977
Duration: Postgraduate traineeship; 6 hours instruction
Fee: $25
Designed For: General practitioners; Specialists
Enrollment: Maximum, 75
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Matthew J. Buchele, MD, Box R, San Augustine 75972

Title: Medical Update, 1977
Sponsor: First District Medical Society, El Paso
Location of Course: Pecos Country Club, El Paso
Date: Feb 5, 1977
Duration: 1 day; 7 total course hours
Fee: $25 (includes lunch)
Designed For: General practitioners
Credit: AAFP
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Laurance N. Nickey, MD, 1515 N Oregon St, El Paso 79902

Title: Family Practice Review
Sponsor: UT Medical Branch, Galveston
Location of Course: Galvez Hotel, Galveston
Dates: Feb 6-12, 1977
Duration: Continuous; 8 am-5 pm; 48 total course hours
Fee: $125
Designed For: General practitioners; Specialists
Enrollment: Minimum, 75; Maximum, 110
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel, seminar, television, live clinic
Contact: NeKee McNulty, Assistant Director, Continuing Education, UT Medical Branch, Galveston 77550

Title: Office Management of Hypertension
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Feb 9-March 30, 1977
Duration: 7:30-9 pm; Wednesdays; 10 total course hours
Fee: $35
Designed For: General practitioners; Specialists
Enrollment: Minimum, 10
Credit: AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Title: Diagnostic and Therapeutic Advances in Clinical Neurology
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Feb 11-12, 1977
Duration: Continuous; 10 total course hours
Fee: $75
Designed For: General practitioners; Specialists
Enrollment: Minimum, 15; Maximum, 50
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, patient demonstration, television
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Gastroenterology

Title: Pathophysiological Basis of Digestive Disease Therapy

Sponsor: American College of Physicians
Location of Course: Scott and White Hospital, Temple
Dates: Feb 10-12, 1977
Duration: Continuous; 8:30 am-5:30 pm Thursday; 8:30 am-5:30 pm Friday; 8:30 am-12:30 pm Saturday
Fee: ACP Members, FACP, Residents, Fellows, $100; Nonmembers, $150; ACP Associates, $50
Designed For: Specialists in Gastroenterology, Internal Medicine; Surgeons with special interest in Digestive Diseases
Enrollment: Minimum, 50; Maximum, 150
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, television, live clinic
Contact: N.C. Hightower, MD, Director, Research and Education, Scott and White Hospital, 2401 S 31st St, Temple 76501

Internal Medicine

Title: Course on Critical Care Medicine
Sponsor: Baylor College of Medicine, Houston
Location of Course: Jesse Jones Library Auditorium, Houston; Methodist Hospital Auditorium, Houston
Dates: Feb 10-12, 1977
Duration: Continuous; 24 total course hours
Fee: $200
Designed For: General practitioners; Specialists in Internal Medicine
Enrollment: Maximum, 125
Credit: AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Title: New Attitudes and Treatment of Hypertension
Sponsor: UT Health Science Center at Houston
Date: Feb 17, 1977
Duration: 1 day
Fee: To be announced
Designed For: General practitioners; Specialists in Internal Medicine
Credit: AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Medical Writing

Title: Medical and Technical Writing
Sponsor: UT Health Science Center at Houston
Location of Course: UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute, Houston
Date: February 1977
Teaching Methods: Lecture
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Ophthalmology

Title: Advanced Course in Ophthalmic Microsurgery
Sponsors: Girard and Associates: Louis J. Girard, MD; Rowland S. Hawkins, MD
Location of Course: Twelve Oaks Hospital, Houston
Dates: Feb 17-19, 1977; Repeated April 14-16, 1977; July 21-23, 1977; Nov 17-19, 1977
Duration: Continuous; 8 hours instruction per day; 24 total course hours
Fee: $650
Designed For: Specialists in Ophthalmology
Enrollment: Minimum, 8; Maximum, 20
Teaching Methods: Audiovisual materials, enrollee performs procedure, lecture, open question, patient demonstration, seminar
Contact: Louis J. Girard, MD, Course Director, 4126 Southwest Freeway, Suite 500, Houston 77027

Title: Symposium on External Eye Disease
Sponsors: Department of Ophthalmology, UT Health Science Center at Houston; Texas Ophthalmological Association
Location of Course: Marriott Motor Hotel, Houston
Dates: Feb 18-19, 1977
Duration: 9 am-5 pm; 2 days; 13 total course hours
Fee: TOA members, no fee; Nonmembers, $100
Designed For: Specialists in Ophthalmology
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Richard S. Ruiz, MD, Chairman, Department of Ophthalmology, 1121 Hermann Professional Bldg, Houston 77030

Title: Annual Symposium of the San Antonio Ophthalmology and Otolaryngology Society
Sponsors: San Antonio Ophthalmology and Otolaryngology Society; UT Health Science Center at San Antonio
Location of Course: La Mansión Hotel, San Antonio
Date: Feb 26, 1977
Duration: Continuous; 7 total course hours
Fee: San Antonio Ophthalmology and Otolaryngology Society members, $45; Nonmembers, $50
Designed For: Specialists in Ophthalmology, Otolaryngology
Enrollment: Maximum, 175
Credit: Category I, AMA Physician's Recognition Award

Teaching Methods: Audiovisual materials, lecture, open question
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Otolaryngology

Title: The Voice Institute
Sponsors: Baylor College of Medicine, Houston; Methodist Hospital, Houston
Dates: Feb 17-18, 1977
Duration: Continuous
Fee: To be announced
Designed For: Specialists in Otolaryngology
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Pathology

Title: Occupational Pulmonary Disease and Carcinoma of the Lung
Sponsor: Baylor College of Medicine, Houston
Location of Course: Jesse Jones Library Building Auditorium, Houston
Dates: Feb 25-26, 1977
Duration: Continuous; 6 hours per day; 12 total course hours
Fee: $150
Designed For: General practitioners; Specialists in Pathology, Occupational Medicine, Public Health, Internal Medicine
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

MARCH

Adolescent's Medical Care

Title: Current Concepts in Adolescent Medicine
Sponsors: UT Health Science Center at Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: UT Health Science Center at Dallas
Dates: March 11-12, 1977
Duration: Continuous
Fee: Physicians, $50; Non-physicians, $25
Designed For: General practitioners; Specialists in Pediatrics, Psychiatry
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, lecture, open question, panel, seminar
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Basic Sciences: Microbiology & Immunology

Title: Basic Immunology for the Clinician
Sponsors: UT Health Science Center at Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: UT Health Science Center at Dallas
Dates: March 2-5, 1977
Duration: Continuous; 30 total course hours
Designed For: General practitioners; Specialists in Pediatrics, Internal Medicine
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, seminar
Contact: June Bovill, Assistant to Associate Dean for Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Family Medicine

Title: Spring Seminar
Sponsor: Texas Academy of Family Physicians, Permian Basin Chapter
Location of Course: Indian Lodge, Fort Davis
Dates: March 25-26, 1977
Duration: Continuous; 9 am-4 pm; 6 total course hours
Fee: $30
Designed For: General practitioners; Specialists in General Surgery, Internal Medicine
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: William Bart Pate, MD, 202 N Second St, Alpine 79830

Geriatrics

Title: Geriatrics '77
Sponsor: UT Medical Branch, Galveston
Location of Course: Galvez Hotel, Galveston
Dates: March 24-26, 1977
Duration: Continuous; 8 hours instruction per day; 20 total course hours
Fee: $80 (tentative)
Designed For: General practitioners; Specialists
Enrollment: Minimum, 40; Maximum, 75
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar, television
Contact: NeKee McNulty, Assistant Director, Continuing Education Division, UT Medical Branch, Galveston 77550

Internal Medicine

Title: Internal Medicine for the Practitioner
Sponsor: UT Health Science Center at Houston

Dates: March 7-10, 1977
Fee: To be announced
Designed For: Specialists in Internal Medicine
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Grant Taylor, MD, Office of the Director, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: The Physiological Basis of Clinical Disease
Sponsor: American College of Physicians
Location of Course: UT Health Science Center at Dallas
Dates: March 14-17, 1977
Duration: Continuous; 9 am-5 pm; 28 total course hours
Fee: American College of Physicians members, residents, $120; Nonmembers, $175; Associates, $60
Designed For: General practitioners; Specialists
Enrollment: Minimum, 100; Maximum, 400
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: Linda M. Salsinger, Registrar, American College of Physicians, 4200 Pine St, Philadelphia 19104

Malignant Disease

Title: 30th Annual Symposium on Fundamental Cancer Research: Cell Differentiation and Neoplasia
Sponsors: UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute; National Cancer Institute. American Cancer Society
Location of Course: Shamrock Hilton Hotel, Houston
Dates: March 2-4, 1977
Duration: 8 am-5 pm
Fee: To be announced
Designed For: General practitioners; Full- and part-time specialists
Enrollment: Maximum, 1200
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Grant Taylor, MD, Office of the Director, UT Health Science Center at Houston, Box 20367, Houston 77025

Neurology

Title: 28th Western Institute on Epilepsy, Contemporary Perspectives in the Treatment of Epilepsy
Sponsors: The Blue Bird Circle Children's Clinic for Neurological Disorders; Baylor College of Medicine; The University of Texas
Location of Course: Shamrock Hilton Hotel, Houston
Dates: March 17-19, 1977
Duration: Continuous
Fee: To be announced
Designed For: General practitioners; Specialists in Internal Medicine, Pediatrics, Neurology
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Obstetrics & Gynecology

Title: A Symposium for the Practicing Physician: Management of High Risk Obstetrical and Neonatal Patients
Sponsors: Departments of Obstetrics & Gynecology and Pediatrics, UT Medical School at Houston; UT Medical School at San Antonio; UT Medical School at Dallas; UT Medical Branch, Galveston
Location of Course: The Woodlands Executive Conference Center; The Woodlands, Tex
Dates: March 16-19, 1977
Contact: Office of Continuing Education, UT Medical School at Houston, Box 20708, Houston 77025

Orthopedic Surgery

Title: 13th Annual Orthopedic Symposium: Clinical Management and Pathology of Selective Orthopedic Maladies
Sponsors: St Luke's Episcopal Hospital, Houston; Baylor College of Medicine, Houston
Location of Course: Jesse H. Jones Auditorium, Texas Medical Center, Houston
Dates: March 31-April 2, 1977
Contact: Joseph Barnhart, MD, Houston Orthopedic Clinic, 5620 Greenbriar, Houston 77005

Physical Medicine & Rehabilitation

Title: Pathophysiology and Clinical Management of Neuromuscular Disease
Sponsors: Veterans Administration Hospital, Houston; Baylor College of Medicine, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: March 24-26, 1977
Duration: Continuous; 8 hours per day; 2½ days; 20 total course hours
Fee: None
Designed For: General practitioners; Specialists in Physical Medicine and Rehabilitation, Neurology
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar, live clinic
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Tolinase®
tolazamide, Upjohn

Please contact your Upjohn representative for additional product information.

Upjohn

J-5695-6

©1977 THE UPJOHN COMPANY

When Big Ben looks "a little off"...

Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

■ **Most Widely Prescribed**—Antivert is the most widely prescribed agent for the management of vertigo* associated with diseases affecting the vestibular system such as Menière's disease, labyrinthitis, and vestibular neuronitis.

■ **Relief of Nausea and Vomiting**—Antivert/25 can relieve the nausea and vomiting often associated with vertigo.*

■ **Dosage for Vertigo***—The usual adult dosage for Antivert/25 is one tablet t.i.d.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

MEETINGS

CHILD ABUSE CONFERENCE

Vincent De Francis, JD, director, Children's Division, American Humane Association, Denver, Colo, is the keynote speaker at the 1977 Dallas-Fort Worth Metroplex Child Abuse Conference. The conference will be held at Gooch Auditorium, Southwestern Medical School, Dallas, Feb 24-25, 1977.

Contact: 1977 Child Abuse Conference, Dallas-Fort Worth Metroplex, 2500 Maple Ave, Dallas 75201

DISTRICT I MEDICAL SOCIETY

Saturday, Feb 5, 1977, is the date of the District I Medical Society's annual meeting. The meeting takes place at the Pecos Country Club in Pecos, Tex. The program, titled "Medical Update—1977," features several El Paso physicians. Among these are Robert D. Schneider, MD; William J. Nelson, MD; Fay Millett, MD; Charles P. Cavaretta, MD; and Wilbur J. Strader, MD. The topics they will discuss include management of headaches, computerized axial tomography, histocompatible antigens and relationship to rheumatic disease, thyroid disease, and hypertension. L.S. Thompson, MD, Dallas, president of Texas Medical Association will address the luncheon and business meeting.

Contact: LN Nickey, MD, 1515 N Oregon St, El Paso, Tex 79902

NATIONAL CONFERENCE ON THE IMPAIRED PHYSICIAN

Successful programs and various treatment techniques used to help the physician-patient will be the major theme of the Second National Conference on the Impaired Physician. The meeting will focus on those physicians suffering from emotional, psychological or pathological conditions that may impair the doctor's judgment and skill. Sponsored by the American Medical Association and the Medical Association of Georgia, this meeting will be held Feb 4-6, 1977, at the Hyatt Regency Hotel in Atlanta. Speakers and participants will examine the special problems of the physician-patient whose disability is caused by alcoholism, drug dependence or a mental disorder.

Contact: Department of Mental Health, American Medical Association, 535 N Dearborn St, Chicago 60610

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Las Vegas Convention Center, 44th Annual Meeting, Las Vegas, Nev, Feb 3-8, 1977. Features: scientific exhibits, technical exhibits, scientific program, symposia, audio-visual program, sound-slide program, instructional courses, business meetings, assembly of new members, president's reception, annual banquet. Complimentary shuttle bus service to and from Las Vegas Convention Center and selected hotels. Mormon Tabernacle Choir to present concert Friday, Feb 4. Sunday evening, Feb 6, set aside for alumni meetings. Contact: Charles V. Heck, MD, Exec Dir, 430 N Michigan Ave, Chicago 60611.

AMERICAN COLLEGE OF CHEST PHYSICIANS, postgraduate course, Management of Acute and Chronic Respiratory Failure, Konover Hotel, Miami Beach, Fla, Feb 7-11, 1977. Initial sessions of course stress pulmonary function in health and disease, assessment of patient with respiratory insufficiency. Free exchange of information on problems related to recognition and management of acute and chronic respiratory failure in daily practice is encouraged between student and faculty. 26 hours, Category I, AMA Physician's Recognition Award. Registration fees: ACCP members, $160; non-member physicians, $185; residents, nurses, allied health professionals, $125. Contact: Dale E Braddy, American College of Chest Physicians, 911 Busse Highway, Park Ridge, Ill 60068.

ASPEN RADIOLOGY CONFERENCE, Aspen Institute for Humanistic Studies, Aspen, Colo, Feb 28-Mar 4, 1977. Designed for physicians, scientists interested in diagnostic radiology, nuclear radiology, diagnostic ultrasound. Discussion topics include advances in bone, cardiovascular, gastrointestinal, ob/gyn and neuroradiology involving tri-radiological approach. Independent course in diagnostic ultrasound, plenary session on total body CT scanning. Contact: Emanuel Salzman, MD, Conference Chmn, Division of Radiology, Beth Israel Hospital, Denver, Colo 80204.

For other courses and symposiums, see Continuing Education Courses, pp 33-36.

FEBRUARY

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Las Vegas, Nev, Feb 3-8, 1977. Charles V Heck-MD, Exec Dir, 430 N Michigan Ave, Chicago 60611.

AMERICAN COLLEGE OF CARDIOLOGY, Philadelphia, Feb 28-Mar 3, 1977. William D Nelligan, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN COLLEGE OF NUCLEAR PHYSICIANS, New Orleans, Feb 9-13, 1977. K Nicolas, 1730 Pennsylvania Ave NW, Suite 1160, Washington, DC 20006.

AMERICAN COLLEGE OF PSYCHIATRISTS, Atlanta, Feb 2-6, 1977. JC Nemiah, MD, Beth Israel Hospital, 330 Brookline Ave, Boston 02215.

AMERICAN COUNCIL OF MEDICAL STAFFS, Washington, DC, February, 1977. JL Garcia-Oller, MD, 3422 Bienville St, New Orleans 70119.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, New Orleans, Feb 6-9, 1977. BF Alfano, MD, Exec Sec, 675 Main St, Melrose, Mass 02176.

AMERICAN SOCIETY FOR SURGERY OF THE HAND, Las Vegas, Nev, Feb 1-3, 1977. JA Boswick, Jr, MD, Sec, University of Colorado Medical Center, 4200 E 9th Ave, Denver 80220.

ASPEN RADIOLOGY CONFERENCE, Aspen, Colo, Feb 28-Mar 4, 1977. Emanuel Salzman, MD, Conference Chairman, Division of Radiology, Beth Israel Hospital, Denver 80204.

■ EAST TEXAS CHAPTER, AMERICAN ACADEMY OF FAMILY PHYSICIANS, Carthage, Tex, Feb 27, 1977. WC Smith, MD, Program Chmn, 313 W Panola St, Carthage, Tex 75633.

■ FIRST DISTRICT MEDICAL SOCIETY, Pecos, Tex, Feb 7, 1977. LN Nickey, MD, 1515 N Oregon St, El Paso, Tex 79902.

INTERNATIONAL ACADEMY OF PROCTOLOGY, Kuala Lumpur, Singapore, Bali, Hong Kong and Taipei, Feb 17-Mar 7, 1977. Alfred J Cantor, MD, 96 Wildwood Rd, Great Neck, NY 11024.

TAOS MEDICAL SYMPOSIUM, Taos, NM, Feb 16-19, 1977. Thomas A Bodnar, Exec Dir, Albuquerque & Bernalillo County Medical Association, 2660 Yale Blvd SE #103, Albuquerque, NM 87106.

■ TEXAS PUBLIC HEALTH ASSOCIATION, Corpus Christi, Tex, Feb 27-Mar 2, 1977. Robert E Monroe, Exec Sec, 4107 Medical Parkway #201, Austin, Tex 78766.

MARCH

AMERICAN ACADEMY OF ALLERGY, New York, Mar 26-31, 1977. DL McNeil, Exec Dir, 225 E Michigan St, Milwaukee 53202.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Durango, Colo, Mar 18-19, 1977. 2660 Yale Blvd, SE, Suite 105, Albuquerque, NM 87106.

AMERICAN COLLEGE OF SURGEONS, Los Angeles, Mar 28-31, 1977. CR Hanlon, MD, Dir, 55 E Erie St, Chicago 60611.

AMERICAN MEDICAL ASSOCIATION NATIONAL CONFERENCE ON RURAL HEALTH, Seattle, Mar 30-Apr 1, 1977. AMA Department of Rural and Community Health, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL STUDENT ASSOCIATION, Chicago, Mar 30-Apr 3, 1977. LR Giancola, Exec Dir, 1171 Tower Rd, Schaumburg, Ill 60195.

■ AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS, Dallas, Mar 23-25, 1977. Mrs Elaine Galasso, Exec Sec, 1718 Gallagher Rd, Norristown, Pa 19401.

■ DALLAS SOUTHERN CLINICAL SOCIETY, Dallas, Mar 28-30, 1977. Robert L Heath, Exec Officer, 3630 Noble Ave, Dallas 76204.

NATIONAL CONFERENCE ON RURAL HEALTH, Seattle, Mar 30-Apr 1, 1977. American Medical Association, 535 N Dearborn St, Chicago 60610.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, New Orleans, Mar 28-31, 1977. 1430 Tulane Ave, New Orleans 70112.

■ SOCIETY OF NUCLEAR MEDICINE, SOUTHWEST CHAPTER, El Paso, Tex, Mar 18-20, 1977. RJ Gorten, MD, 916 Strand, Galveston, Tex 77560.

SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, Little Rock, Ark, Mar 16-18, 1977. Exec Sec, 4300 N Lamar Blvd, Austin, Tex 78756.

■ TEXAS ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Houston, Mar 4-5, 1977. Iris Wenzel, 1801 N Lamar, Austin, Tex 78701.

■ TEXAS RADIOLOGICAL SOCIETY, Dallas, Mar 17-19, 1977. Iris Wenzel, 1801 N Lamar, Austin, Tex 78701.

■ UT SYSTEM MD ANDERSON HOSPITAL AND TUMOR INSTITUTE, Symposium on Fundamental Cancer Research, Houston, Mar 2-4, 1977. Stephen C Stuyck, MD, MD Anderson Hospital and Tumor Institute, Houston 77030.

■ VALLEY CHAPTER, TEXAS ACADEMY OF FAMILY PHYSICIANS, McAllen, Tex. Mar 31-Apr 2, 1977. CE Barrera, MD, 606 S Broadway, McAllen, Tex 78501.

APRIL

AMERICAN ACADEMY OF NEUROLOGY, Atlanta, Apr 26-30, 1977. Stanley A Nelson, Exec Dir, 4015 W 66th, Suite 302A, Minneapolis 65436.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Toronto, Apr 18-20, 1977. WT Maloney, 6 Beacon St, Suite 620, Boston 02108.

AMERICAN COLLEGE HEALTH ASSOCIATION, Philadelphia, Apr 19-22, 1977. James W Dilley, Exec Dir, 2807 Central, Evanston, Ill 60201.

■ AMERICAN COLLEGE OF PHYSICIANS, Dallas, Apr 18-21, 1977. EC Rosenow, Exec Vice-pres, 4200 Pine St, Philadelphia 19104.

■ AMERICAN COLLEGE OF RADIOLOGY, Houston, Apr 17-22, 1977. WC Stronach, Exec Dir, 20 N Wacker Dr, Chicago 60606.

AMERICAN GERIATRICS SOCIETY, San Francisco, Apr 13-14, 1977. 10 Columbus Circle, New York 10019.

AMERICAN OCCUPATIONAL MEDICAL ASSOCIATION, Boston, Apr 24-28, 1977. Howard N Schulz, Exec Dir, 150 N Wacker Dr, Chicago 60606.

AMERICAN PEDIATRIC SOCIETY, San Francisco, Apr 25-29, 1977. David Goldring, MD, Sec, 500 S Kingshighway, St Louis 63110.

AMERICAN UROLOGICAL ASSOCIATION, INC, Chicago, Apr 24-28, 1977. Richard J Hannigan, Exec Officer, 1120 N Charles St, Baltimore 21201.

ARKANSAS MEDICAL SOCIETY, Little Rock, Apr 24-27, 1977. CC Long, MD, Exec Vice-pres, 214 N 12th, Box 1208, Fort Smith, Ark 72901.

■ CHILDREN'S HOSPITAL, SANTA ROSA MEDICAL CENTER, Location to be announced, Apr 30-May 1, 1977. Howard A Britton, Medical Director, Children's Hospital, Santa Rosa Medical Center, San Antonio, Tex 78285.

SOCIETY OF TEACHERS OF FAMILY MEDICINE, New Orleans, Apr 17-20, 1977. Ms PL Plhak, Exec Dir, 1740 W 92nd St, Kansas City, Mo 64114.

SOUTHEASTERN SURGICAL CONGRESS, Bal Harbour, Fla, Apr 3-7, 1977. AH Letton, MD, Sec-Dir, 315 Boulevard NE, Suite 500, Atlanta 30312.

■ SOUTHWEST ALLERGY FORUM, Lakeway Inn, Austin, Tex, Apr 30-May 4, 1977. Theo S Painter, Jr, MD, Suite 107, Medical Park Tower, Austin, Tex 78705.

■ ST LUKE'S EPISCOPAL HOSPITAL/BAYLOR COLLEGE OF MEDICINE, 13th Annual Orthopedic Symposium, Houston, Apr 1-2, 1977. Alexander E Brodsky, MD, 505 Medical Towers Bldg, Houston 77025.

■ TEXAS SOCIETY OF CHILD PSYCHIATRY, San Antonio, Tex, Apr 1-2, 1977. Alberto C Serrano, MD, Pres, 2135 Babcock Rd, San Antonio, Tex 78229.

■ TEXAS SURGICAL SOCIETY, Galveston, Tex, April, 1977. Robb H Rutledge, Sec, 901 S Lake St, Fort Worth, Tex 76104.

■ TEXAS UROLOGIC SOCIETY, Laredo, Tex, Apr 15-16, 1977. Carlos H Mata, MD, Sec-Treas, 1012 Santa Ursula, Laredo, Tex 78040.

■ TRAVIS CLINIC FOUNDATION, Jacksonville, Tex, April, 1977. James H Pesnell, Box 870, Jacksonville, Tex 75766.

MAY

■ AMERICAN MEDICAL STUDENT ASSOCIATION-UT MEDICAL BRANCH NATIONAL STUDENT RESEARCH FORUM, Galveston, Tex, May 4-7, 1977. Room 209, Libbie Moody Thompson Basic Sciences Building, UT Medical Branch, Galveston, Tex 77550.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, San Antonio, Tex, May 19-22, 1977. Geraldine Midgley, Box 1287, Uvalde, Tex 78801.

■ NORTH TEXAS CHAPTER, AMERICAN COLLEGE OF SURGEONS, Dallas, May, 1977. Felix P Peppard, MD, FACS, Sec-Treas, 3600 Gaston, Dallas 75246.

■ TEXAS AIR-MEDICS ASSOCIATION, Houston, May 12, 1977. CF Miller, MD, Box 1338, Waco, Tex 76703.

■ TEXAS DERMATOLOGICAL SOCIETY, Houston, May 14-15, 1977. William F Spiller, MD, Sec, 5000 Montrose, Houston 77006.

■ TEXAS DIABETES ASSOCIATION, Houston, May 13, 1977. Eric A Orzeck, MD, 7800 Fannin, Houston 77054.

■ **TEXAS MEDICAL ASSOCIATION, Annual Session, Houston, May 11-15, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.**

■ TEXAS OCCUPATIONAL MEDICAL ASSOCIATION, Houston, May 12, 1977. Frank J Kelly, MD, Box 647, Amarillo, Tex 79604.

■ TEXAS OPHTHALMOLOGICAL ASSOCIATION, Houston, May, 1977. CA Struve, MD, Pres-elect, Box 6374, Corpus Christi, Tex 78411.

JUNE

■ TEXAS HEART INSTITUTE, Houston, Jun 2-4, 1977. Mrs Verna Dewees, Sec to Medical Director, Box 20269, Houston 77025.

AMERICAN MEDICAL ASSOCIATION, Annual Convention, San Francisco, Jun 18-23, 1977. James H Sammons, MD, Exec Vice-pres, 535 N Dearborn St, Chicago 60610.

INTERNATIONAL CONGRESS OF RHEUMATOLOGY, San Francisco, Jun 26-Jul 1, 1977. 9650 Rockville Pike, Bethesda, Md 20014.

JULY

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Mescalero, NM, Jul 18-21, 1977. Bob Reid, Convention Dir, Box 456, Sunland Park, NM 88063.

consider the effect on coexisting diabetes when you prescribe a vasodilator*

(POSTERIOR VIEW OF PANCREAS)

no interference in the management of the diabetic patient has been reported with

VASODILAN®
(ISOXSUPRINE HCl)

the compatible vasodilator TABLETS, 20 mg.

*__Indications:__ Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily.

Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

Mead Johnson LABORATORIES

© 1977, MEAD JOHNSON & COMPANY, EVANSVILLE, INDIANA 47721 U.S.A. MJL5-4117R1

All oral bronchodilators are pretty much the same. Right? Wrong!

The difference is in their action—both before and after symptoms begin. That's the reason for TEDRAL®.

- ☐ effective and prolonged bronchodilation from the synergistic effect of ephedrine and theophylline
- ☐ β-ADRENERGIC ACTION RELAXES BRONCHIAL SMOOTH MUSCLE
- ☐ α-ADRENERGIC ACTION REDUCES BRONCHIAL EDEMA AND SECRETIONS
- ☐ dosage forms to meet individual patient needs

For proven performance...

Tedral® / Tedral® SA / Tedral® Elixir

Each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital

Each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer), and 25 mg phenobarbital in the immediate release layer.

SUSTAINED ACTION

Each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine HCl, and 2 mg phenobarbital; the alcohol content is 15%.

See next page for brief summary.

WC **WARNER/CHILCOTT**
Division, Warner-Lambert Company
Morris Plains, New Jersey 07950 T-GP-72-B/W

TEDRAL®

TEDRAL® SA Sustained Action

TEDRAL® Elixir

CAUTION: Federal law prohibits dispensing Tedral SA without prescription.

Description. Tedral: each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Tedral SA: each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer); 25 mg phenobarbital in the immediate release layer.

Tedral Elixir: each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine hydrochloride, and 2 mg phenobarbital; the alcohol content is 15%.

Indications. Tedral, Tedral SA, and Tedral Elixir are indicated for the symptomatic relief of bronchial asthma, asthmatic bronchitis, and other bronchospastic disorders. They may also be used prophylactically to abort or minimize asthmatic attacks and are of value in managing occasional, seasonal or perennial asthma.

Tedral SA (Sustained Action) offers the convenience of b.i.d. dosage.

Tedral Elixir is convenient for persons who may have difficulty in swallowing tablets.

These Tedral formulations are adjuncts in the total management of the asthmatic patient. Acute or severe asthmatic attacks may necessitate supplemental therapy with other drugs by inhalation or other parenteral routes.

Contraindications. Sensitivity to any of the ingredients; porphyria.

Warnings. Drowsiness may occur. PHENOBARBITAL MAY BE HABIT-FORMING.

Precautions. Use with caution in the presence of cardiovascular disease, severe hypertension, hyperthyroidism, prostatic hypertrophy, or glaucoma.

Adverse Reactions. Mild epigastric distress, palpitation, tremulousness, insomnia, difficulty of micturition, and CNS stimulation have been reported.

Average Dosage. *Prophylactic or Therapeutic.*

Tedral: *Adults*—One or two tablets every 4 hours. *Children*—(Over 60 lb) one-half the adult dose.

Tedral SA: *Adults*—One tablet on arising and one tablet 12 hours later. Tablets should not be chewed. *Children*—Not established for children under 12.

Tedral Elixir: Note: One teaspoonful is equivalent to *one-quarter* Tedral tablet. *Children*—One teaspoonful per 30 lb body weight, every 4-6 hours, unless prescribed otherwise by physician. Should be given to children under 2 years of age only with extreme caution. *Adults*—One to two tablespoonfuls every four hours.

Supplied. Tedral: White, uncoated scored tablets in bottles of 24 (N 0047-0230-24), 100 (N 0047-0230-51) and 1000 (N 0047-0230-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0230-11).

Tedral SA: Double-layered, uncoated, coral/mottled white tablets in bottles of 100 (N 0047-0231-51) and 1000 (N 0047-0231-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0231-11).

Tedral Elixir: Dark red and cherry-flavored in 474 ml (16 fl oz) bottles (N 0047-0242-16).

STORE BETWEEN 59° and 86°F (15° and 30°C).

Full information is available on request.

Do you have patients with Paget's Disease of Bone?

You can get updated information on the disease and on effective treatment for its symptoms of bone pain, skeletal deformities, and neurologic deficits.

Just send the coupon below.

Armour Pharmaceutical Company
Greyhound Tower
111 West Clarendon Avenue
Phoenix, Arizona 85077

☐ Send latest information on Paget's Disease of Bone.
☐ Have your representative call on me.

Dr. _____

Address _____

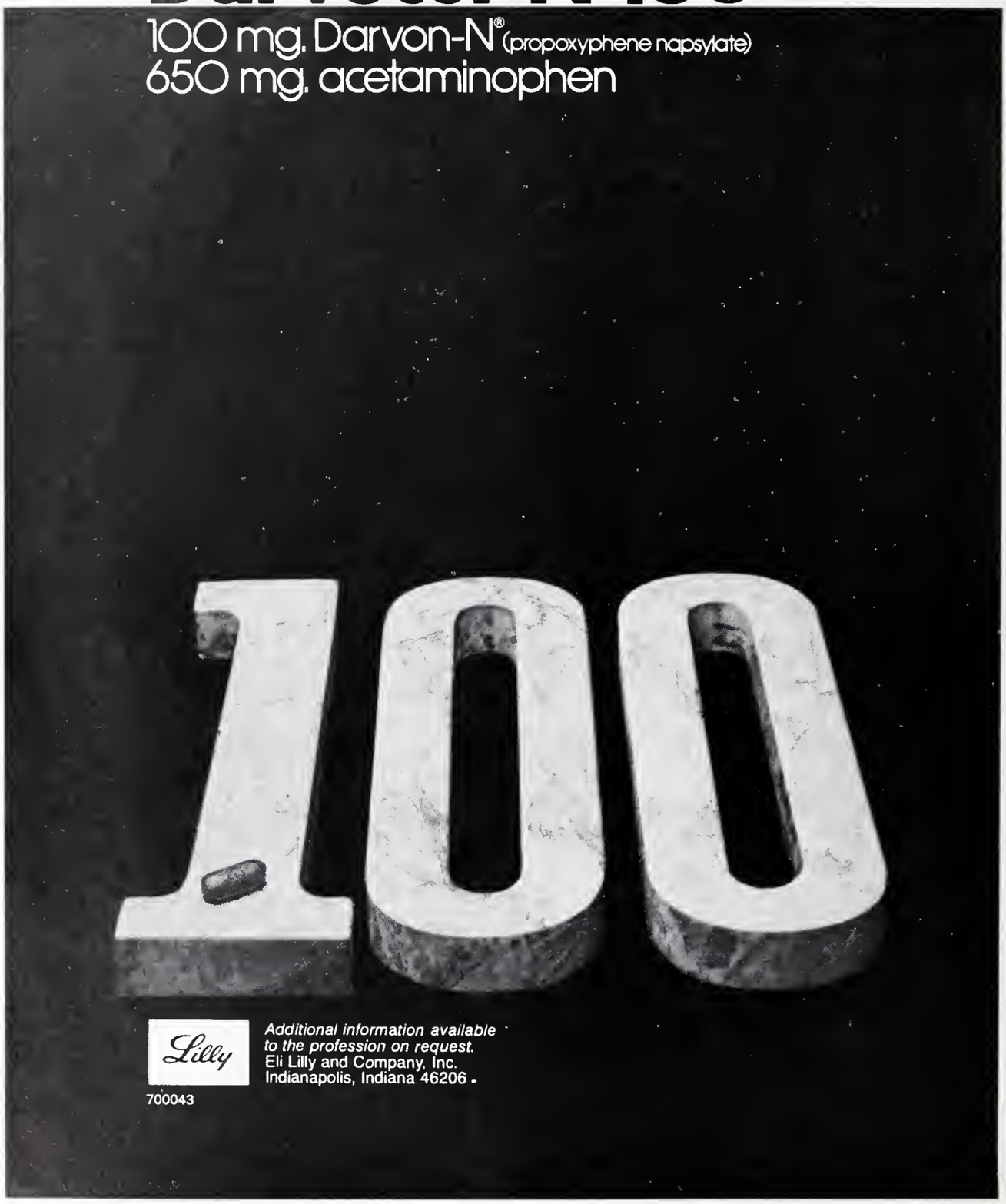
City _____ State _____ Zip _____

contains no aspirin

tablets

Darvocet-N® 100

100 mg. Darvon-N® (propoxyphene napsylate)
650 mg. acetaminophen



Lilly

Additional information available to the profession on request.
Eli Lilly and Company, Inc.
Indianapolis, Indiana 46206

700043

Assessing fetal maturity: amniotic fluid assessment

C.M. Hinkley, MD; R.B. Wait, MD; A. Werch, MD; P.K. Besch, PhD

This article briefly describes the use of biochemical parameters in amniotic fluid to assess fetal maturity and aid the physician in timing of delivery. We have tried to explain the methods in terms applicable to all hospital laboratories, and to discuss the interpretations and pitfalls inherent in each determination. These tests, combined with mature clinical judgment, should aid the physician in the care of the mother and unborn child.

Modern obstetrics has increasingly concerned itself with reducing perinatal mortality and morbidity and evaluating the antepartum condition of the fetus *in utero*. Timing of delivery becomes the single most important factor in reducing perinatal loss. In each case the obstetrician must weigh the danger to the fetus of continuing *in utero* existence against the risk of early delivery and neonatal morbidity. Ideally, delivery should occur at the time when the risk of intrauterine death and the risk of neonatal death are minimal. No one method of determining the optimum time for delivery is available. However, new biochemical assessment of the condition of the fetus based on amniotic fluid analysis does give the clinical information that, when combined with clinical judgment, enables the physician to decide with a reasonable degree of accuracy the timing of delivery.

This article outlines the technique of amniocentesis and the biochemical method of analysis of amniotic fluid along with specific uses and problems in interpreting the data compiled.

Technique of Amniocentesis

The amniocentesis tray presently being used at Baylor College of Medicine contains towels, 4-by-4-inch gauze pads; sponge stick for prepping the abdomen; a cup for prepping solution; a small, capped, brown, opaque bottle to protect amniotic fluid from the light; and two disposable 10-ml syringes. A disposable 3½ inch #22-gauge spinal needle with stylus completes the tray. If ultrasonic examination with a beta scan is available, then placental localization should be performed. The finding of a posterior placenta is most reassuring and usually means that little difficulty will be encountered in performing amniocentesis. An anterior placenta makes the procedure slightly more dangerous for the fetus, but usually fluid can be obtained at the edge of the placenta in the lower uterine segment where risk of laceration of a large placental vessel is minimal. In more difficult cases, a beta scan may be utilized to locate amniotic fluid so that amniocentesis under "direct visualization with sonar" may be advantageous.

An area of approximately 10 cm in diameter is prepped below the umbilicus and the area is draped. No local anesthetic is necessary since the procedure is no more painful than an intravenous stick. With the stylus in place, the needle is rapidly thrust to the depth which the examiner believes will place the tip of the needle within the amniotic cavity. Amniotic fluid should appear at the needle hub within a few seconds. If fluid does not appear, the needle should be rotated 90° and another few seconds allowed for the fluid to enter the hub. If no fluid appears at this time, then a 10-ml syringe is attached to the needle hub and an attempt is made to aspirate. In the event that no fluid is obtained with aspiration, the needle is slowly withdrawn with negative pressure applied by the syringe. If blood is withdrawn on

aspiration, this indicates that the needle is either in the myometrium or the placenta and the stylus should be replaced, the needle withdrawn, and an attempt made to obtain fluid at a different site.

The fluid, once obtained, is centrifuged and placed directly into the brown, opaque bottle.

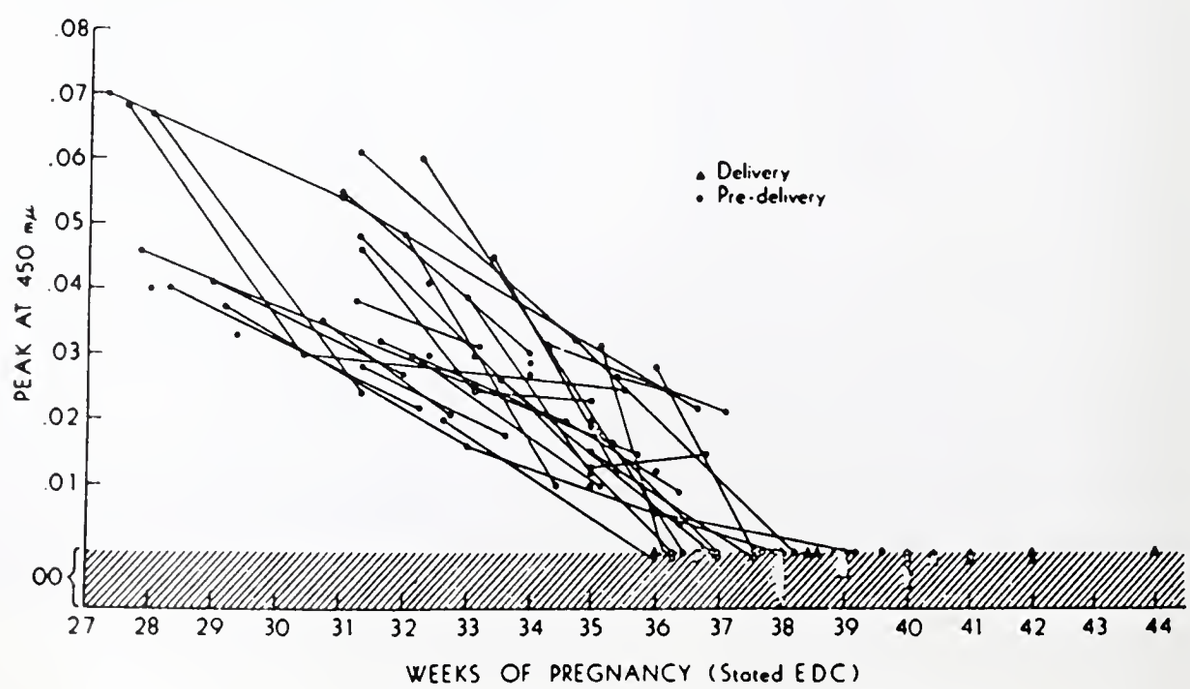
Amniotic Fluid Analysis

The routine analysis done on amniotic fluid at our institution includes the optical density at 450 mμ for bilirubin content, total solute content as measured by osmolality, creatinine level in the amniotic fluid, Nile blue sulfate staining of cells in the amniotic fluid, and the chromatographic determination of the lecithin/sphingomyelin ratio.

The bilirubin content of amniotic fluid is estimated indirectly by deviation of the spectrophotometric curve at 450 mμ from a straight line connecting optical densities at 365 and 550 mμ.[1]

Interpretation: In the normal pregnancy, the bilirubin content of amniotic fluid decreases throughout gestation so that when fetal maturity has been achieved, the bilirubin content in the amniotic fluid is essentially 0. Fig 1 graphically illustrates this fall in serial measurements. In patients who have Rh-negative blood factor and are sensitized, this expected fall may not occur and is representative of the severity of the hemolytic disease. We will not attempt to cover the evaluation of amniotic fluid in pregnant women who have the Rh-negative blood factor. Several factors in pregnancies, not affected by the Rh factor, may also lead to elevation of the amniotic fluid bilirubin content. The earlier in gestation amniocentesis is attempted, the more bilirubin is likely to be present. Meconium or oxyhemoglobin in amniotic fluid tends to cause elevation of the amniotic fluid bilirubin, and the presence of maternal hepa-

1. Fall in serial measurements of bilirubin content of amniotic fluid.



titis or sickle cell anemia will cause the optical density at 450 mμ to be increased and make utilization of this test for determining fetal maturity difficult to interpret.

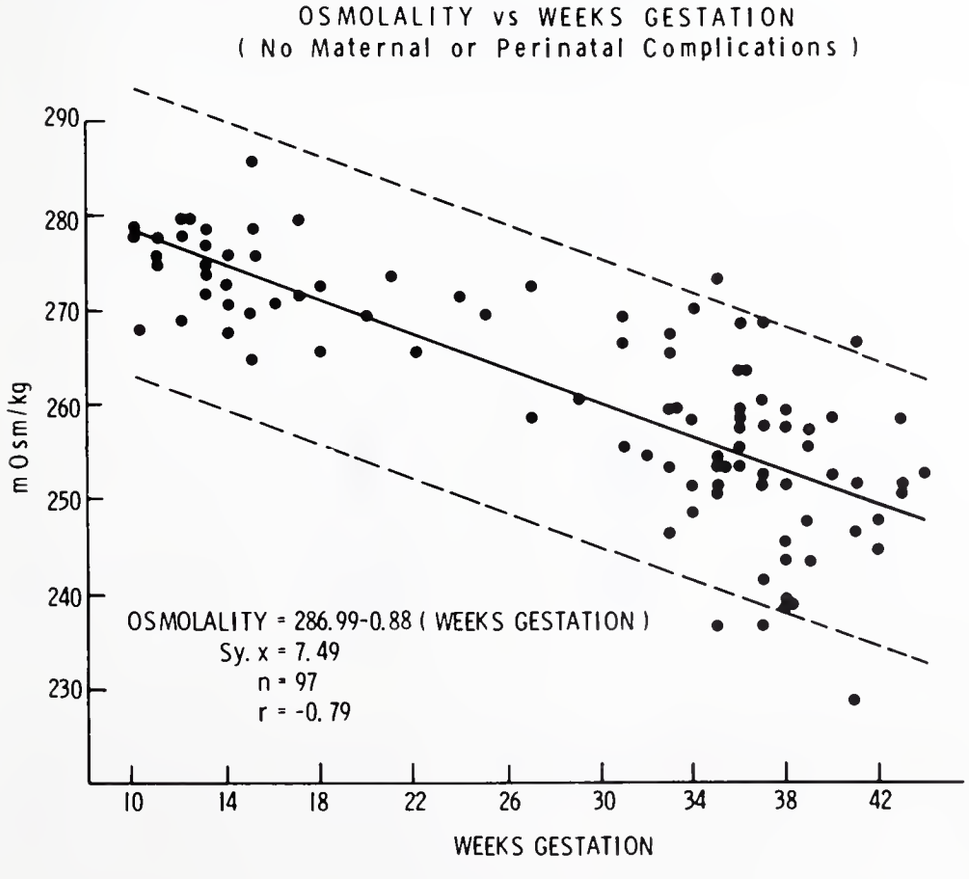
The osmolality of amniotic fluid is determined in duplicate by freezing point depression.

Interpretation: Fig 2 shows that amniotic fluid osmolality also tends to decrease in a regular manner throughout gestation. This fall probably represents the fetal kidneys maturing and reabsorbing solutes such as sodium, potassium, and glucose filtered by the fetal glomerulus. Caution should be exercised because some experimental evidence suggests that in cases of fetal jeopardy the osmolality may be higher than would be expected at a given gestational age.

Nile blue: Amniotic fluid is spun down and the small sediment of cells placed on a glass slide. One drop of 0.1% aqueous Nile blue sulfate is added and the slide is gently warmed and observed under the microscope. Five hundred cells are then counted and the percentage of cells staining orange is determined.

Interpretation: The presence of cells that take up fat stain in the amniotic fluid probably represents maturation of sebaceous glands in the fetus and desquamation of sebaceous cells in the amniotic fluid. More than 20% fat-staining cells correlates well with a fetal gestational age of greater than 36 weeks (Fig 3). The ease with which this test is performed and the degree of correlation is such that it be-

2. Decrease in amniotic fluid osmolality throughout gestation.



comes one of the most useful indicators of fetal maturity.

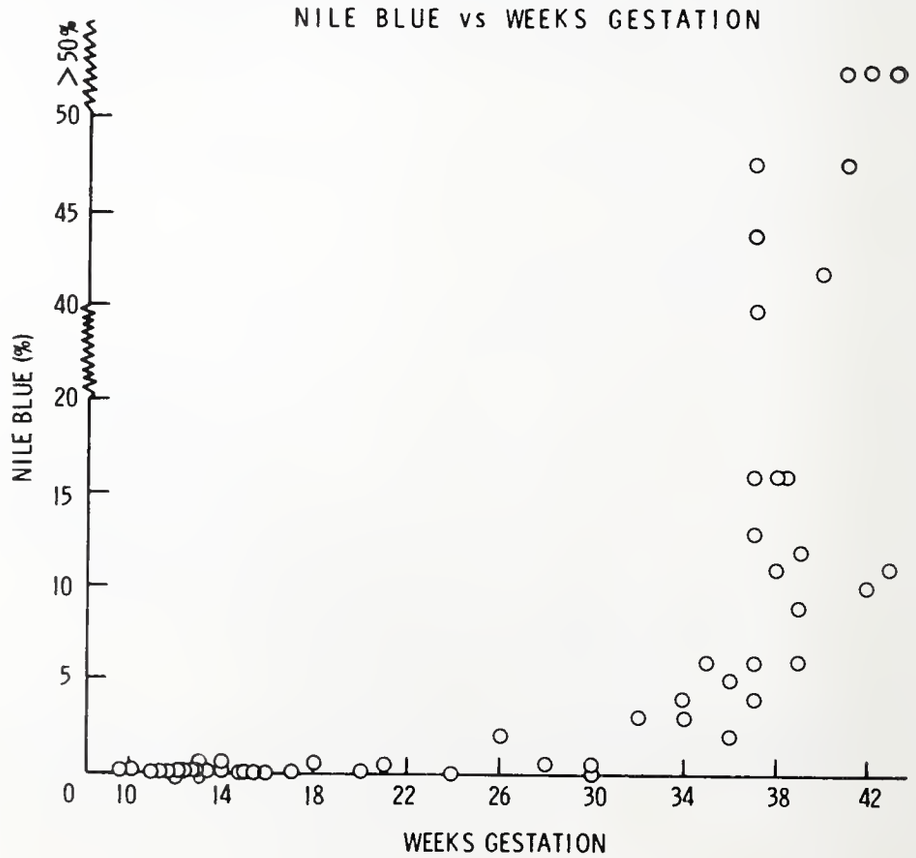
Creatinine methods: The amount of creatinine in amniotic fluid is determined by the Hare modification of Börsook's analysis.[2]

Interpretation: Fig 4 indicates that the quantity of creatinine in the amniotic fluid tends to rise throughout gestation. This rise is probably related most closely to the total muscle mass of the fetus as well as to the ability of the fetal kidney to excrete creatinine. In normal gestation a level of 1.8 mg/100 ml or higher of creatinine in amniotic fluid indicates fetal maturity. Caution must be utilized in interpreting maturity based on the level of creatinine when the physician is dealing with a patient who has either chronic hypertension or preeclampsia/eclampsia. In both of these conditions there is a tendency for the creatinine level to be much higher than in normal pregnancies, and utilizing this test to assess maturity of the fetus in the pregnant women with hypertension is fraught with danger.

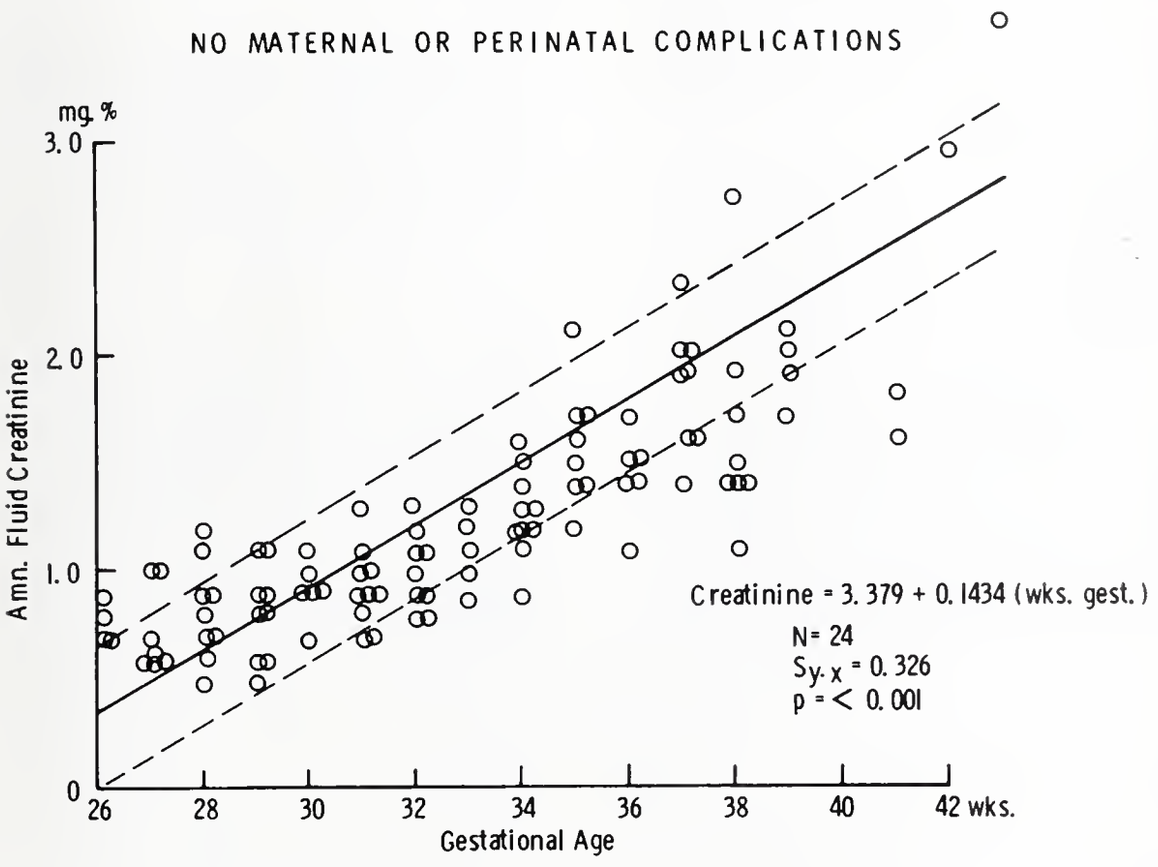
Lecithin/sphingomyelin ratio is determined by Borer's modification of Gluck's method.[3]

Interpretation: Fig 5 presents the chromatographic interpretation of the lecithin/sphingomyelin ratio in amniotic fluid. Fig 6 correlates the lecithin/sphingomyelin content of amniotic fluid with gestational age. Lecithin/sphingomyelin ratio of two or greater indicates fetal lung maturity.

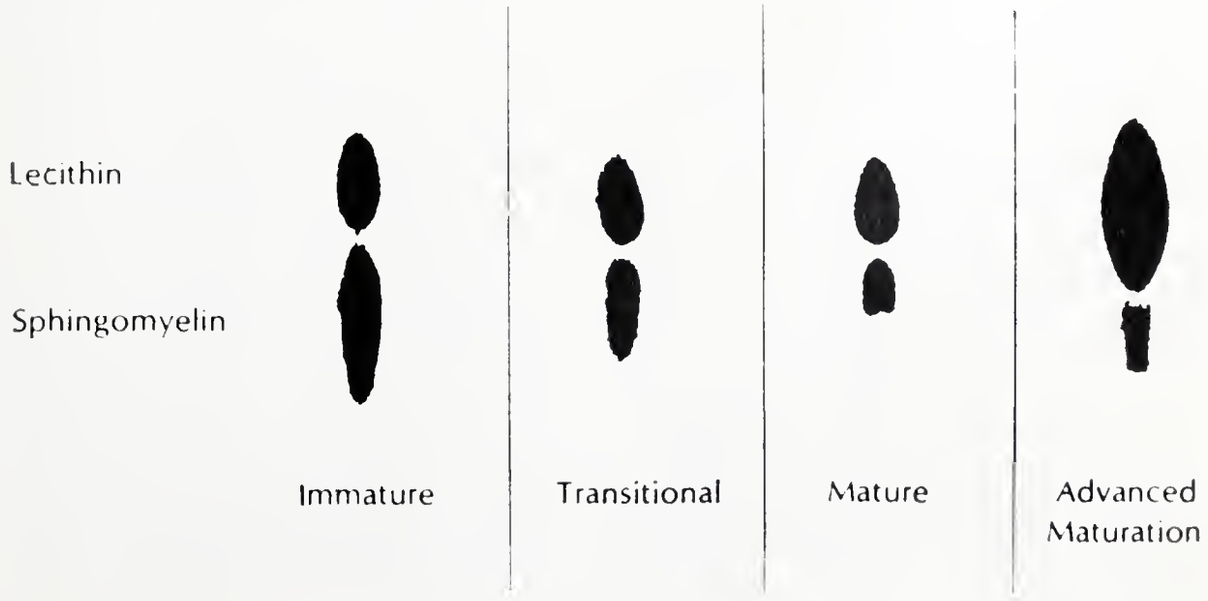
3. Cells that take up fat stain in amniotic fluid are counted; if more than 20% of the cells stain, the fetus probably is older than 36 weeks.



4. The quantity of creatinine in amniotic fluid tends to rise throughout gestation.



5. The lecithin/sphingomyelin ratio is determined by chromatographic methods.



Many conditions in obstetrics have been shown to accelerate lung maturity and allow delivery of a compromised fetus at an early gestational age who will survive free of respiratory distress syndrome and hyaline membrane disease.

This test has become the single most important determination of timing of delivery since its introduction by Gluck and associates.[3] Conditions such as preeclampsia/eclampsia, chronic hypertension, diabetes, and premature rupture of the membranes are said to accelerate the maturation process within the fetal lung and allow such babies to be delivered with reasonable assurance that the risk of respiratory distress syndrome or hyaline membrane disease will be minimal. Determination of this ratio is especially useful in patients with known or suspected intrauterine growth retardation. A mature lecithin/sphingomyelin ratio would be reassuring in the timing of delivery even though the estimated fetal weight and other usual clinical parameters might suggest that the baby should be left *in utero* for a longer time.

This comprehensive review article was prepared for *Texas Medicine* through the cooperation of Fred M. Taylor, MD, director, Office of Continuing Education, Baylor College of Medicine, Houston.

References

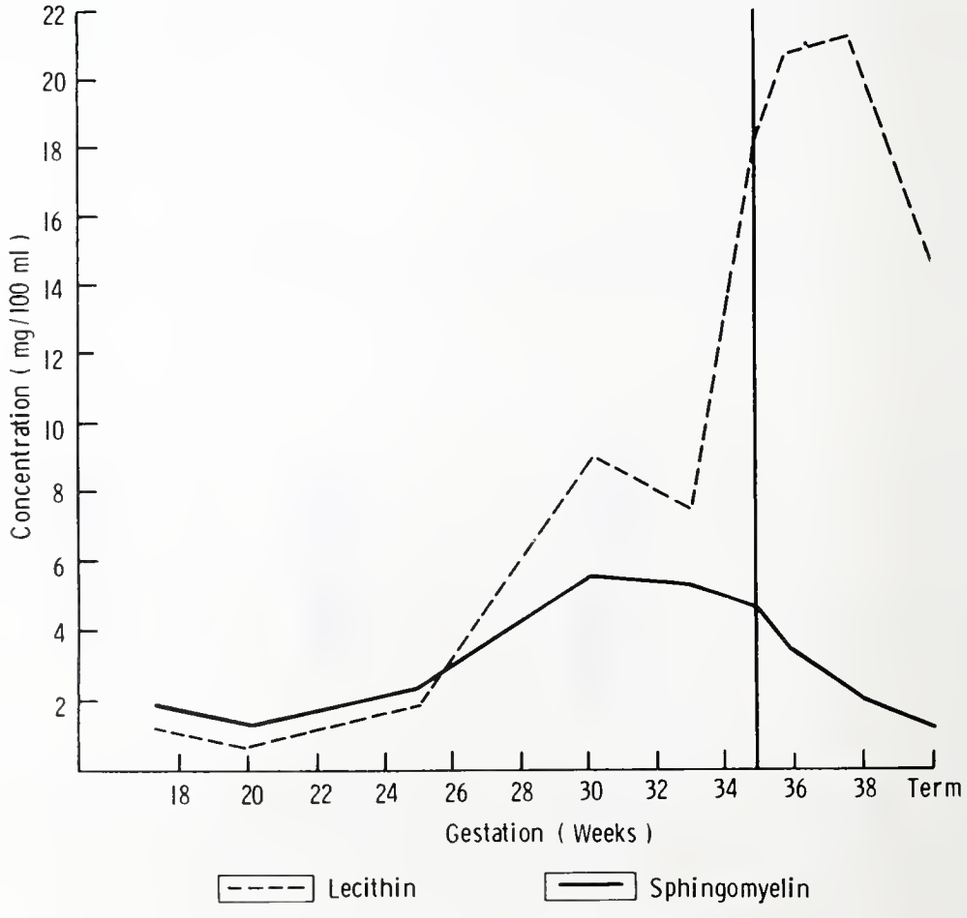
1. Brazie JV, Ibbott FA, Bowes WA Jr: Identification of the pigment in amniotic fluid of erythroblastosis as bilirubin. J Pediat 69:354-358, 1966.

2. Hare RS: Endogenous creatinine in serum and urine. Proc Soc Exper Biol Med 74:148-151, 1950.

3. Borer RC Jr, Gluck L, Freeman RK, et al: Prenatal prediction of the respiratory distress syndrome (RDS). (abstr) Pediat Res 5:655, 1971.

The authors, Department of Obstetrics and Gynecology, Baylor College of Medicine, 1200 Moursund Ave, Houston, TX 77030.

6. The lecithin/sphingomyelin content of amniotic fluid correlates with gestational age.



Hemodynamic effects of oral and sublingual forms of isosorbide dinitrate in patients with acute coronary insufficiency

Lawrence R. Poliner, MD; William Ritter, MD; Armand J. Wohl, MD;
J. V. Nixon, MD; James T. Willerson, MD

The onset, peak, and duration of the hemodynamic effects of oral and sublingual isosorbide dinitrate in equivalent dosage were compared in the same nine patients admitted to the coronary care unit with signs and symptoms of acute coronary insufficiency. Ten milligrams of either sublingual or oral isosorbide dinitrate were administered in alternate sequence and hemodynamic effects monitored until pressures returned to near control values. A minimum of one hour was allowed to elapse after return to near control values before administration of isosorbide dinitrate by the alternate route. Control values for systemic mean arterial pressure, mean pulmonary arterial pressure, and mean pulmonary capillary wedge pressure before administration of sublingual and oral isosorbide dinitrate were not significantly different. Both the sublingual and oral routes of administration of isosorbide dinitrate significantly decreased mean systemic arterial, mean pulmonary arterial, and mean pulmonary capillary wedge pressures in patients with normal as well as with elevated pulmonary capillary wedge pressures. The onset and peak hemodynamic effects of isosorbide dinitrate administered orally occurred later and were more prolonged than those of the same drug administered sublingually. There was, however, no statistical difference between the maximal hemodynamic effects of oral and sublingual isosorbide dinitrate. Neither route of administration of the drug significantly increased heart rate. The data obtained in this study suggest that isosorbide dinitrate has therapeutic value when administered by either the oral or sublingual route in patients with and without left ventricular failure admitted to the hospital with acute coronary insufficiency.

Long-acting nitrates have been utilized in patients with coronary artery disease to try to reduce the frequency of angina and improve work capacity. These agents have also been used in patients with refractory left ventricular failure as a means of afterload and preload reduction.[1,2] Isosorbide dinitrate (Isordil) has been one of the most commonly utilized long-acting nitrates in patients with coronary artery disease, but it has been suggested that this agent should only be given sublingually because when it is given orally to patients with normal liver function, it is rapidly degraded by the liver and is therefore therapeutically ineffective.[1,2] The relative hemodynamic effectiveness of oral and sublingual isosorbide dinitrate in patients admitted to the hospital with acute coronary insufficiency (particularly those without acute or chronic left ventricular failure) has not been studied in detail, yet this group is probably the largest to whom this pharmacological agent is administered. The purpose of our study was to examine the relative hemodynamic potency of oral and sublingual isosorbide dinitrate in the same patients admitted to the hospital with chest pain suggesting acute coronary insufficiency.

Methods

The study group consisted of patients admitted to the coronary care unit at Parkland Memorial Hospital, Dallas, Texas, with a diagnosis of acute coronary insufficiency and whose primary physicians felt that the use of long-acting nitrates was clinically indicated. The patients were studied at 3-6 days (mean 4 days) following admission to the coronary care unit. Informed consent was obtained.

An arterial catheter was placed in the radial or occasionally the brachial artery utilizing a #18 Long-dwell intercath, and a Swan-Ganz balloon-tipped catheter (no. 5 or 7 French) was positioned in the pul-

monary artery utilizing the right antecubital vein. Phasic and mean systemic and pulmonary arterial pressures and pulmonary capillary wedge pressures were measured and recorded. Cardiac output was measured by injecting green dye into the pulmonary artery and sampling at the arterial site. Potentially vasoactive medications were withheld the night before the study.

The study protocol for each patient included measurement of control pressures for 15-20 minutes until hemodynamic stability had been clearly established. Next, cardiac output was measured. Then either sublingual or oral isosorbide dinitrate was administered in alternate sequence in a dosage of 10 mg to the same patients. Hemodynamic parameters were monitored to detect the onset of effect for both sublingual and oral forms of the drug, and were recorded at five-minute intervals for the first 15 minutes after the onset of the sublingual effect. For sublingual and oral isosorbide dinitrate, hemodynamic measurements were made at 15-minute intervals for 60 minutes, and thereafter at 15-30-minute intervals until return to near control values had occurred. Cardiac outputs were repeated one hour after each route of drug administration. After the return of hemodynamic pressures to near control levels, at least one hour was allowed to elapse before administering the second dose of medication by the alternate route. Placebo was also employed in the same manner in three patients, and results were compared to the hemodynamic effects of 10 mg of oral isosorbide dinitrate.

Results

Three patients, two men and one woman, were alternately given placebo and 10 mg oral isosorbide dinitrate. The placebo had no discernible effect on systemic arterial, pulmonary arterial, and pulmonary capillary wedge pressure in any of these patients, while in all three, 10 mg of oral isosorbide dinitrate reduced each hemodynamic parameter that was measured beginning approximately 30 minutes after its administration.

In order to more precisely characterize the hemodynamic effects of oral versus sublingual isosorbide dinitrate, the effects of equivalent dosage of these agents were compared in the same nine patients admitted to the coronary care unit with a diagnosis of acute coronary insufficiency. There were five women and four men with an average age of 56 ± 3 (standard error of the mean) years. Three patients had acute myocardial infarctions while the remaining six had severe chest pain suggesting acute coronary insufficiency, but they did not subsequently evolve either electrocardiographic or enzymatic evidence of acute myocardial infarction. Two patients in this group had both clinical and hemodynamic evidence of moderately severe left ventricular failure.

The mean control pressures immediately before the administration of sublingual isosorbide dinitrate were: mean systemic arterial pressure, 87 ± 6.6 mm Hg; mean pulmonary arterial pressure, 17 ± 2.8 mm Hg; and mean pulmonary capillary wedge pressure, 11 ± 2.6 mm Hg (Fig 1).
Mean control pressures immediately before oral isosorbide dinitrate were: mean systemic arterial pressure, 82 ± 7.1 mm Hg, mean pulmonary arterial pressure, 17 ± 3.1 mm Hg and mean pulmonary capillary wedge pressure, 10 ± 2.1 mm Hg.
There was no significant difference between the control pressures for either sublingual or oral isosorbide dinitrate. As might be expected, the onset of hemodynamic effect began significantly earlier

after sublingual than after oral isosorbide dinitrate administration (Fig 1). The effects of both forms of the drug are shown in Figs 1-4.

Cardiac outputs were not significantly altered one hour after administration of isosorbide dinitrate by either route. Cardiac output during the control period before the administration of oral isosorbide dinitrate was 6 ± 0.5 liters per minute, and fell (but not significantly) to 5.7 ± 0.3 liters per minute one hour after the drug was given; cardiac output for the sublingual isosorbide dinitrate study during the control period was 5.3 ± 0.37, and declined to 4.9 ± 3.4 liters per minute at one hour. Heart rate was 80 ± 3.9 beats per minute at the beginning of these studies, and was not significantly altered by isosorbide dinitrate.

Discussion

Controversy has existed regarding the usefulness of long-acting vasodilators in patients with ischemic heart disease.[1-14] Previous studies with isosorbide dinitrate have yielded varying results regarding the effectiveness of sublingual and, particularly, the oral form of the agent.[1-14] In general, however, the sublingual route of administration has been associated with an improved exercise ability,[11,12] alteration in hemodynamic parameters,[8-12] and relative protection during pacing-induced myocardial ischemia.[8] There has been concern, however, that the oral route of administration is not therapeutically effective[1,2] in patients with normal liver function and without left ventricular failure, although there has been some disagreement on this point.[3,5-7] Patients with severe left ventricular failure do derive hemodynamic benefit from 20 mg of oral isosorbide dinitrate.[3]

Our study was performed in order to directly determine the therapeutic efficacy of oral isosorbide dinitrate in patients admitted to the hospital with signs and symptoms of myocardial ischemia with and without left ventricular failure, and to compare the relative effectiveness of oral and sublingual administration of isosorbide dinitrate in the same patients.

Our results suggest that with either route of administration, the drug is hemo-

1. Hemodynamic effects of isosorbide dinitrate.

Control		Sublingual Isosorbide Dinitrate (N = 9)						
		Onset		Peak		Effect	Duration of Effect	Pressure at Termination
		Pressure	Time	Pressure	Time	% of Control		
$\overline{A}$	87 ± 6.6	79 ± 6.8	7 ± 1.3 min	70 ± 6.8	18 ± 4.0	80 ± 4.6	84 ± 17.0	80 ± 6.6
$\overline{PA}$	17 ± 2.8	12 ± 2.7	6 ± 1.0	9 ± 1.7	16 ± 4.0	51 ± 4.8	72 ± 12.7	15 ± 3.3
$\overline{W}$	11 ± 2.6	7 ± 1.9	6 ± 0.8	4 ± 1.1	15 ± 3.9	36 ± 6.1	90 ± 16	9 ± 2.3
		Oral Isosorbide Dinitrate (N = 9)						
$\overline{A}$	82 ± 7.1	75 ± 6.9	41 ± 7.1	75 ± 6.9	41 ± 7.1	86 ± 3.8	107 ± 19.5	82 ± 7
$\overline{PA}$	17 ± 3.1	14 ± 2.1	19 ± 3	11 ± 2.1	55 ± 10.6	60 ± 7.1	148 ± 17.5	16 ± 3.1
$\overline{W}$	10 ± 2.1	7 ± 2.2	24 ± 5.4	5 ± 2.0	56 ± 14.3	45 ± 11.1	138 ± 16.6	8 ± 2.3

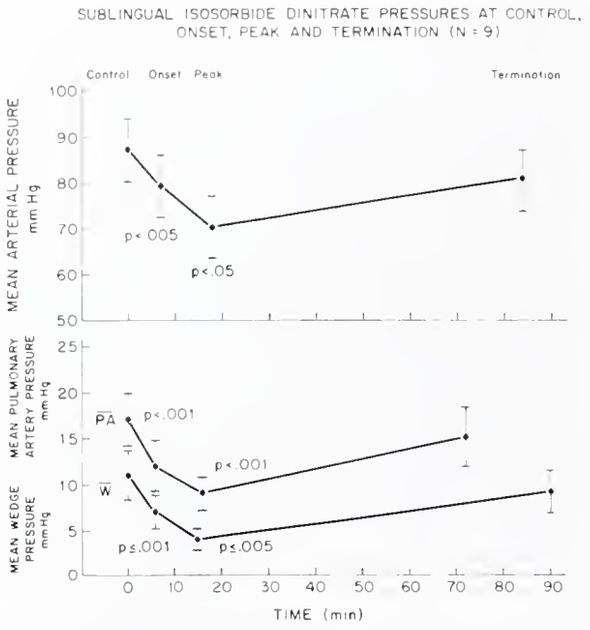
*For 8 patients. One patient in each group demonstrated no depression of mean systemic arterial pressure after isosorbide dinitrate.

Pressures and times at onset, peak, and termination of effect and percent of control at peak effect.

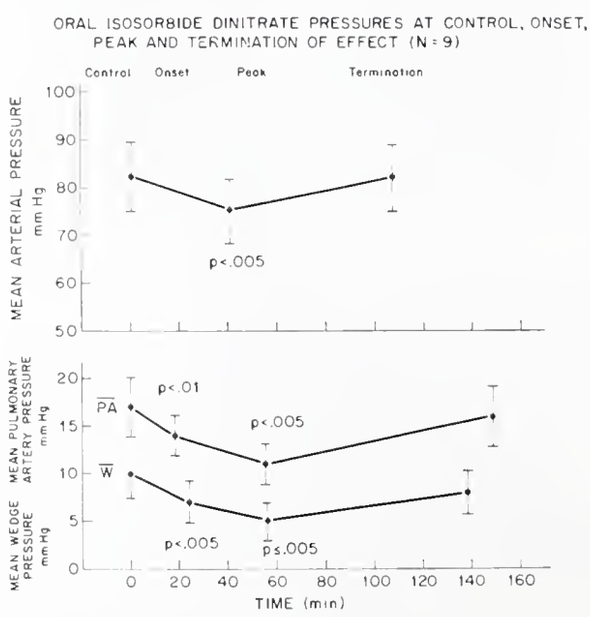
$\overline{A}$: Mean systemic arterial pressure.

$\overline{PA}$: Mean systemic pulmonary arterial pressure.

$\overline{W}$: Mean pulmonary capillary wedge pressure.



2. The changes in mean systemic arterial pressure and in mean pulmonary arterial and mean pulmonary capillary wedge pressure after sublingual isosorbide dinitrate are shown. The closed circles represent mean values and the horizontal bars the standard error.



3. The changes in mean systemic arterial pressure, and in mean pulmonary arterial and mean pulmonary capillary wedge pressure after oral isosorbide dinitrate are shown. The format of the figure is the same as shown in Fig 2.

dynamically effective in patients with acute coronary insufficiency. As might be anticipated, the onset of action of oral isosorbide dinitrate begins later than the sublingual form, which ordinarily produces a hemodynamic effect on mean systemic arterial, mean pulmonary arterial, and mean pulmonary capillary wedge pressures within a few minutes. In most patients oral isosorbide dinitrate exerts its hemodynamic effect on these same parameters approximately 15-30 minutes after its administration. In addition, the peak hemodynamic effect occurs later with oral than with sublingual isosorbide dinitrate, occurring 45-60 minutes after oral administration as compared to 15-20 minutes after the sublingual one. The magnitude of hemodynamic effect, however, upon mean systemic arterial, mean pulmonary arterial, and mean pulmonary capillary wedge pressures was not significantly different for equivalent doses of the oral or sublingual drug. The duration of action of sublingual isosorbide dinitrate in this study was approximately 1 to 1½ hours, as opposed to 2 to 2½ hours for the oral form. The differences noted in the onset and duration of hemodynamic effect for the two different forms of isosorbide dinitrate in these patients with acute coronary insufficiency should have therapeutic relevance in terms of deciding how frequently isosorbide dinitrate needs to be given.

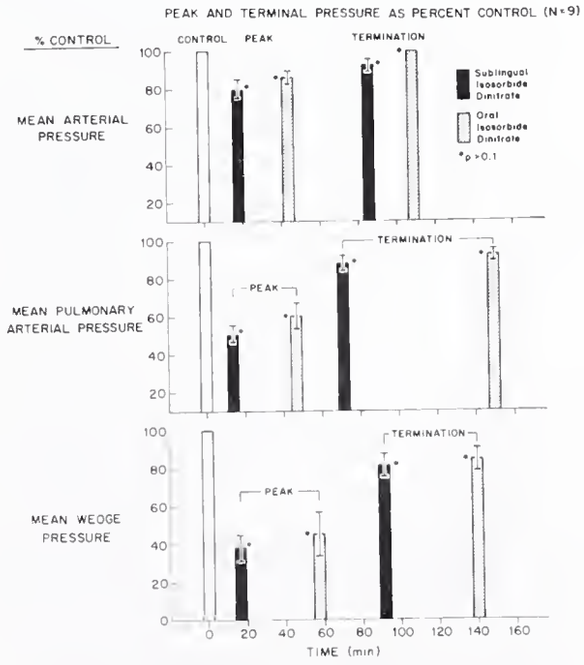
In the patient who had the highest elevation of mean pulmonary capillary wedge pressure (28 mm Hg), the duration of hemodynamic effect of the sublingual drug appeared prolonged. The onset of hemodynamic effect on mean systemic arterial pressure in this patient also was delayed, and occurred 30 minutes after it was administered, as compared to the usual hemodynamic effect within 10 minutes. The mean pulmonary arterial and

mean pulmonary wedge pressures demonstrated the expected onset of hemodynamic changes in the usual time periods, but the maximal hemodynamic effect on mean systemic arterial pressure occurred 45 minutes after the drug had been given. Oral isosorbide dinitrate in this patient did not appear to have distinctive action, but mean pulmonary capillary wedge pressure at the time oral isosorbide dinitrate was given had fallen to 20 mm Hg. In addition, in the patient with the highest pulmonary capillary wedge pressure (22 mm Hg) of those receiving oral isosorbide dinitrate initially, the hemodynamic effect of 10 mg of oral isosorbide dinitrate lasted the longest, with reductions in systemic mean arterial, mean pulmonary arterial, and mean pulmonary capillary wedge pressures persisting for nearly four hours. The duration of effects of the sublingual drug in this patient was not prolonged, but mean pulmonary capillary wedge pressure had fallen to 17 mm Hg when the sublingual drug was administered. The hemodynamic alterations noted in these two patients after oral and sublingual forms of isosorbide dinitrate were given raise the question of whether in some individuals with marked elevations of pulmonary capillary wedge pressures the hemodynamic effects of isosorbide dinitrate may perhaps be more prolonged than those noted in patients with normal left ventricular pressures. This question will have to be answered by studying larger numbers of appropriate patients in the future.

The data obtained in this study demonstrate that isosorbide dinitrate has therapeutic value when given either by the oral or the sublingual route in patients with normal as well as in those with elevated pulmonary capillary wedge pressures admitted to the hospital with chest pain suggestive of acute coronary insufficiency.

The reduction of myocardial wall tension that results from isosorbide dinitrate's ability to reduce afterload and preload would be expected to benefit myocardial oxygen supply demand relationships, and would be clinically favorable in patients with coronary artery disease in reducing the frequency and severity of anginal attacks. Isosorbide dinitrate also increases regional and collateral coronary blood flow in both ischemic and nonischemic regions of the heart in experimental animals.[15] Whether isosorbide dinitrate also possesses the ability to increase collateral coronary blood flow to ischemic left ventricle in man needs to be determined.

This work was supported in part by NIH Ischemic Heart Disease Specialized Center of Research (SCOR) grant HL-17669 and the Harry S. Moss Heart Fund. Dr Willerson is an Established Investigator of the American Heart Association.



4. The magnitude of the peak hemodynamic effect and the time of its occurrence after oral and sublingual isosorbide dinitrate are shown. Changes in mean systemic arterial pressure and in mean pulmonary arterial and mean pulmonary capillary wedge pressure are shown as percent of control values.

Mr Norman Vance, Ms Linda Stevenson, and Ms Judi Kredatus provided technical assistance, and Mrs Donna Place and Mrs Belinda Lambert gave secretarial assistance.

From the Pauline and Adolph Weinberger Laboratory for Cardiopulmonary Research of the Department of Internal Medicine, The University of Texas Southwestern Medical School at Dallas, Dallas.

Dr Willerson, Ischemic Heart Center, L5-134; Drs Poliner, Ritter, and Wohl, Department of Internal Medicine, Cardiopulmonary Division, The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd, Dallas, TX 75235.

Dr Nixon, Cardiology Unit, Veterans Administration Hospital, 4500 Lancaster, Dallas, TX 75216.

References

1. Needleman P, Lang S, Johnson EM Jr: Organic nitrates: relationship between biotransformation and rational angina pectoris therapy. J Pharmacol Exp Ther 181:489-497, 1972.

2. Winsor T: Oral nitrates: efficacious? Ann Intern Med 78:457-458, 1973.

3. Franciosa JA, Mikulic E, Cohn JN, et al: Hemodynamic effects of orally administered isosorbide dinitrate in patients with congestive heart failure. Circulation 50(5):1020-1024, 1974.

4. Mikulic E, Franciosa JA, Cohn JN: Comparative hemodynamic effects of chewable isosorbide dinitrate and nitroglycerin in patients with congestive heart failure. Circulation 52(3):477-482, 1975.

5. Kasparian H, Wiener L, Duca PR, et al: Comparative hemodynamic effects of placebo and oral isosorbide dinitrate in patients with significant coronary artery disease. Am Heart J 90(1):68-74, 1975.

6. Winsor T, Kaye H, Mills B: Hemodynamic response of oral long-acting nitrates: evidence of gastrointestinal absorption. Chest 62:407-413, 1972.

7. Glancy DL, Richter MA, Ellis EV: Effects of swallowed isosorbide dinitrate on blood pressure, heart rate and exercise tolerance in patients with coronary artery disease. (abstr) Clin Res 24:41A, 1976.

8. Steele RJ, Burggraf GW, Parker JO: Effects of isosorbide dinitrate on the response to atrial pacing in coronary heart disease. Am J Cardiol 36(2):206-210, 1975.

9. Sweatman T, Strauss G, Selzer A, et al: The long-acting hemodynamic effects of isosorbide dinitrate. Am J Cardiol 29:475-480, 1972.

10. Willis WH, Russell RO Jr, Mantle JA, et al: The hemodynamic response to sublingual isosorbide dinitrate in unstable angina pectoris. (abstr) Am J Cardiol 33:179, 1974.

11. Klaus AP, Zaret BL, Pitt BL, et al: Comparative evaluation of sublingual long-acting nitrates. Circulation 48:519-525, 1973.

12. Goldstein RE, Rosing DR, Redwood DR, et al: Clinical and circulatory effects of isosorbide dinitrate. Comparison with nitroglycerin. Circulation 43:629-640, 1971.

13. Aronow WS, Chesluk HM: Sublingual isosorbide dinitrate therapy versus sublingual placebo in angina pectoris. Circulation 41:869-874, 1970.

14. Krantz JC Jr, Leake CD: The gastrointestinal absorption of organic nitrates. Am J Cardiol 36(3)407-408, 1975.

15. Watson JT, Jett GK, Rogers DE, et al: Isordil induced temporal changes in collateral coronary blood flow during acute coronary insufficiency. (abstr) Clin Res 23(3):214A, 1975.

Psychiatric manifestations of hyperparathyroidism

Steven Rosenblatt, MD; Louis A. Faillace, MD

In 1942 Eitinger[1] reported that 7 of 50 patients with hyperparathyroidism manifested psychiatric symptoms. Fitz and Hallman[2] in 1952 emphasized major mental changes without bone and renal involvement. Reinfrank[3] in 1961 even suggested adding "mental moan" to the triad of "bone, stone, and abdominal groan" when he reported a patient presenting with a suicidal depression, which resolved after removal of a parathyroid adenoma. Depression has also been reported by others.[4-9]

Case Report

A 40-year-old black man was brought to the emergency room with a three-day history of bizarre behavior, described by his father as talking to God and seeing and hearing things that weren't really there. The patient would not engage in conversation voluntarily. At the approach of anyone other than his father, the patient assumed a reclining position with eyes closed and arms folded across his chest, talked in suspicious terms about prejudicial treatment against him at work because of his color, feelings of being spied upon and plotted against, and fears of someone trying to kill him. He described visual and auditory hallucinations and exhibited loose associations. He was oriented to time, place, and person, but he had some deficit of memory and concentrating ability.

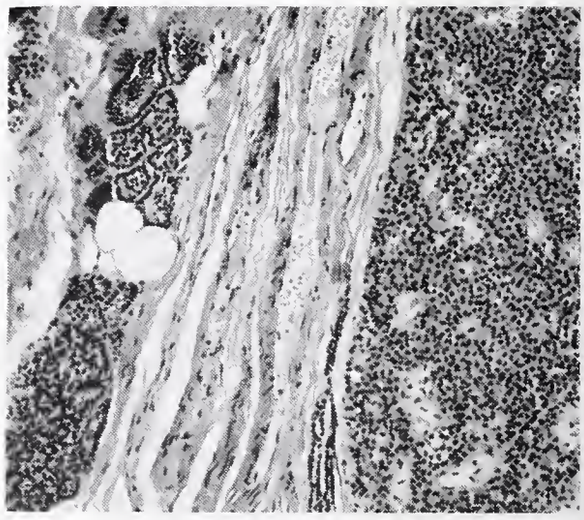
The patient had no psychiatric history. He had been involved in an automobile accident ten months before hospitalization, sustaining a low back injury with persistent pain. Neurologic and orthopedic examinations had not shown any demonstrable abnormality. He had been given a muscle relaxant, carisoprodol, and several analgesics (codeine, orphenadrine citrate with aspirin, phenacetin and caffeine), none of which have been reported to cause hypercalcemia. Apparently, the patient had been using these drugs in higher amounts than prescribed. All these medications were discontinued at the time of admission.

The patient is the eldest of six siblings. His childhood growth and development were apparently unremarkable. He had completed two and one-half years of college, and worked for a governmental agency for the past five years. However, he had not worked since the accident.

On admission, results of his physical examination were within normal limits. There was no adenopathy or skin lesions. Routine laboratory examination showed a serum calcium value of 12.9 mg/100 ml (normal range 8.5 to 10.5). The patient was treated initially with chlorpromazine, but because of orthostatic hypertension, the prescription was changed to haloperidol. The maximum dose was 40 mg a day. After one week his psychotic symptoms disappeared and from that time he complained of excessive weakness, fatigue, and persistent memory defect. Because of these symptoms and hypercalcemia, the patient was examined for hyperparathyroidism. Serial serum calcium values throughout the patient's stay were consistently elevated (Fig 1). Roentgenographic examination of his bony structures showed no abnormalities. Lung fields were clear, and no hilar adenopathy was noted. Parathyroid hormone assay was 459 pg/ml, expressed as bovine PTH (normal range less than 500 pg/ml). The patient underwent jugular venous catheterization and while awaiting the results of these tests, he was discharged, to be followed as an outpatient. By this time his haloperidol had been decreased to 5 mg at bedtime. Within one week of his discharge, the patient complained of increasing weakness, sleeplessness, and memory loss. He was rehospitalized for five days. The patient's medication was increased to 15 mg at bedtime;

Date	Serum Calcium (mg/10 ml)
7/18	12.9
7/19	13.1
7/22	12.3
7/24	12.6
8/31	12.0
9/21	12.7
9/27	14.3
10/2	13.2
Surgery 10/3	
10/5	9.1
10/7	8.8
10/13	10.3
4/15-76	9.6

1. Serum calcium values as expressed in milligrams per 100 milliliters.



2. Photomicrograph of the adenoma (right) next to the normal parathyroid tissue (X 82).

the symptoms abated somewhat and the patient was discharged. Results from the jugular venous catheterization did not show a definite rise on localization of parathyroid hormone. The patient was again hospitalized and a selective thyrocervical arteriogram demonstrated a vascular "blush" in the left inferior thyroid area suggestive of multiple parathyroid adenomata, although only a solitary adenoma was found at surgery (Fig 2). By the fourth postoperative day, there was improvement in the patient's memory, and subjectively he felt less fatigued. His serum calcium levels had returned to normal limits. One month postsurgery, the patient's memory had improved, he complained less of weakness and fatigue, and he felt well enough to return to work.

Discussion

This case illustrates the importance of a careful medical evaluation of a patient, even when he appears to have solely a psychiatric disease. Depression and a variety of other psychiatric symptoms in this disease have been reported without evidence of renal, bone, or gastrointestinal involvement. The response to removal of a parathyroid adenoma has been striking in these cases, as was true with our patient.[2,4,9-11]

The presence of an organic brain syndrome with symptoms of memory defect, disorientation, lethargy, and depression may be cardinal indicators of hyperparathyroidism. Early recognition is essential to minimize both the physical and emotional complications of this disease.

References

1. Eitinger L: Hyperparathyroidism with mental changes. Nord Med 14:1581-1585, 1942.
2. Fitz TE, Hallman BL: Mental changes associated with hyperparathyroidism; report of 2 cases. AMA Arch Intern Med 89:547-551, 1952.
3. Reinfrank RF: Primary hyperparathyroidism with depression. Arch Intern Med (Chicago) 108:606-610, 1961.
4. Bogdonoff MD, Woods AH, White JE, et al: Hyperparathyroidism. Amer J Med 21:583-595, 1956.
5. Karpati G, Frame B: Neuropsychiatric disorders in primary hyperparathyroidism. Clinical analysis with review of the literature. Arch Neurol (Chicago) 10:387-397, 1964.
6. Anderson J: The psychiatric aspects of disturbed calcium metabolism. Psychiatric aspects of primary hyperparathyroidism. Proc Roy Soc Med 61:1123-1124, 1968.
7. Petersen P: Psychiatric disorders in primary hyperparathyroidism. J Clin Endocr 28:1491-1495, 1968.
8. Flanagan TA, Goodwin DW, Alderson P: Psychiatric illness in a large family with familial hyperparathyroidism. Br J Psychiatry 117:693-698, 1970.
9. Smith CK, Barish J, Correa J, et al: Psychiatric disturbance in endocrinologic disease. Psychosom Med 34:69-86, 1972.
10. Watson L: The psychiatric aspects of disturbed calcium metabolism. Clinical aspects of hyperparathyroidism. Proc Roy Soc Med 61:1123, 1968.
11. Gatewood JW, Organ CH Jr, Mead BT: Mental changes associated with hyperparathyroidism. Am J Psychiatry 132(2):129-132, 1975.

The authors, The University of Texas Medical School at Houston, Department of Psychiatry, 6400 West Cullen, Houston, TX 77030.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

TEXAS REPRESENTATIVES

A. F. Ennis, Jr. and B. C. Crim, Suite 210, 712 N. Washington, Dallas 75246 — Telephone (214) 821-4640
W. L. Kirk, 1508 Hermann Prof. Bldg., Houston 77030 — Telephone (713) 797-9835
M. C. Rollins, 408 GPM Bldg., South Tower, San Antonio 78216 — Telephone (512) 344-5901

KELSEY-SEYBOLD CLINIC

TEXAS MEDICAL CENTER ● 6624 FANNIN STREET ● HOUSTON, TEXAS 77030 ● AC (713) 797-1551

INTERNAL MEDICINE

Allergy
C. W. Ewing, M.D., F.A.C.A.
Arthritis and Rheumatic Diseases
J. W. Kemper, M.D., F.A.C.P.
M. S. Fischer, M.D.
Cardiology
E. F. Beard, M.D., F.A.C.P.
D. D. Goulden, M.D.
M. J. Mihalick, M.D.
Endocrine and Metabolic Diseases
M. P. Kelsey, M.D., F.A.C.P.
A. E. Leiser, M.D., F.A.C.P.
P. K. Champion, Jr., M.D., F.A.C.P.
Gastrointestinal Diseases, Endoscopy
J. R. Kelsey, Jr., M.D., F.A.C.P.
P. S. Bentlif, M.D., F.A.C.P.
R. D. Eichhorn, M.D., F.A.C.P.
F. S. O'Neil, M.D., F.A.C.P.
J. W. McBee, M.D., F.A.C.P.
General Internal Medicine
G. E. Burke, M.D.
C. F. Taboada, M.D., F.A.C.P.
N. H. Nauert, Jr., M.D.
G. G. Bourianoff, M.D.
Hematology
J. B. Bart, M.D., F.A.C.P.
Infectious Diseases
S. Riggs, M.D., F.A.C.P.
Nuclear Medicine
D. E. Mouton, M.D.
Oncology
E. N. Root, M.D.
Pulmonary Diseases, Bronchoscopy
S. P. Fischer, M.D., F.A.C.P.
B. D. Walker, M.D.

DERMATOLOGY

W. M. Fraser, M.D., F.A.A.D.
D. W. Owens, M.D., F.A.A.D.

GENERAL & THORACIC SURGERY

Surgical Endoscopy & Colonoscopy
W. D. Seybold, M.D., F.A.C.S.
J. D. McMurrey, M.D., F.A.C.S.
J. L. Doggett, M.D., F.A.C.S.
M. F. Appel, M.D., F.A.C.S.

NEUROLOGY

R. R. Pierce, M.D., F.A.A.N.
W. R. Seybold, M.D.

OBSTETRICS & GYNECOLOGY

M. L. Cody, M.D., F.A.C.S., F.A.C.O.G.
W. A. Johnson III, M.D., F.A.C.O.G.

OCCUPATIONAL & PREVENTIVE MEDICINE

M. B. Johnston, M.D., F.A.C.Pr.M.
H. B. Elwell, Jr., M.D.
R. M. Fenno, M.D., F.A.C.P.
F. A. Goss, M.D.
W. R. Hawkins, M.D., F.A.C.Pr.M.
W. R. Hein, M.D.
L. A. Herrmann, M.D.
G. F. Kelly, M.D., F.A.C.Pr.M.
J. Mackay, M.D.
C. A. Owen, M.D., F.A.C.S.
C. G. Petry, M.D.
B. W. Prior, M.D., F.A.C.Pr.M.
N. A. Tadros, M.D., F.A.C.Pr.M.
A. M. Wyss, M.D., F.A.C.Pr.M.

OPHTHALMOLOGY

H. E. Wahlen, M.D., D.A.B.O.
J. E. Key, II, M.D.

ORTHOPEDIC SURGERY

R. A. Fulford, M.D., F.R.C.S. (C)
T. H. Crouch, M.D., F.A.C.S.

OTOLARYNGOLOGY

J. C. Dickson, M.D., F.A.C.S.
J. L. Smith, M.D., F.A.C.S.
L. P. Conrad, M.D.

PATHOLOGY

R. A. Jordan, M.D., F.A.S.C.P.

PEDIATRICS

Rheumatology
E. J. Brewer, Jr., M.D., F.A.A.P.
Allergy and Pulmonary Diseases
C. W. Ewing, M.D., F.A.A.P.
Gastroenterology
G. D. Ferry, M.D., F.A.A.P.
General Pediatrics and Consultation
F. J. Boland, M.D.
R. M. Thaller, M.D.
K. C. Pinckard, M.D.

PSYCHIATRY

C. G. Cochran, M.D.
R. Daichman, M.D.

RADIOLOGY

R. J. Kurth, M.D., F.A.C.R.
E. G. Linares, M.D.
P. Raphael, M.D.

UROLOGY

D. W. Pranke, M.D., F.A.C.S.
F. M. Fry, M.D.

DENTISTRY

J. W. Orr, D.D.S.
D. L. McClung, D.D.S.

SPEECH PATHOLOGY & AUDIOLOGY

D. R. Fox, Ph.D.
J. W. Porter, M.A.
N. Shulak, M.A.

EXECUTIVE DIRECTOR

J. A. Bakken, F.A.C.M.G.A.

K-S POST OAK

Post Oak Tower Building, Suite 385
5051 Westheimer
Houston, Texas 77027
(713) 622-8340

K-S WEST

1900 Yorktown, Houston, Texas
77024 (713) 622-8211

K-S DOWNTOWN

Two Houston Center, Suite P-310
909 Fannin Street, Houston, Texas
77002 (713) 654-4401

THIS EXTRAORDINARY KID INGESTS ENOUGH IRON.

(19 of 20 preschoolers don't)

The data come from the recent survey designed to assess the nutritional status of the *entire* U.S. population. It is the *first* such survey.*

95% of our preschoolers had mean iron intakes about 2/3 of the standard.

Accordingly, *suspecting* iron deficiency routinely is not inappropriate. And, when your diagnosis is confirmed, consider whether dietary measures can correct the problem.

But when dietary change won't work, select a pleasant tasting dietary supplement with iron that encourages compliance.

INCREMIN®

Dietary Supplement

with IRON Syrup

It really tastes okay

Each teaspoonful (5 ml.) contains:

Elemental Iron (as Ferric Pyrophosphate)	30 mg
l-Lysine HCl	300 mg
Thiamine HCl (B_1)	10 mg
Pyridoxine HCl (B_6)	5 mg
Vitamin B_{12}	25 mcgm
Sorbitol	3.5 Gm
Alcohol	0.75%

DOSAGE: Prevention of iron-deficiency anemia — Children and Adults — 1 tsp. (5 ml.) daily. Treatment of iron deficiency anemia — Children: 1 tsp. t.i.d. Adults: 1 tsp. q.i.d.

SUPPLY: Bottles of 4 fl. oz. and 16 fl. oz.

Lederle

LEDERLE LABORATORIES
A Division of American Cyanamid Company
Pearl River, New York 10965

*First Health and Nutrition Examination Survey, DHEW Pub. No. (HRA) 74-1219-1, National Center for Health Statistics, Rockville, Maryland

#029-7

Temporarily
STOP
Unproductive Coughs

A new product that
temporarily stops the cough

Ryna-C™

Syrup

C V

EFFECTIVE FORMULA

- Codeine Phosphate .....10 mg
  (Warning: May be habit forming)
- Pseudoephedrine Hydrochloride .....30 mg
- Chlorpheniramine Maleate ..... 2 mg

PATIENT BENEFITS

- Provides effective cough suppression
- Provides effective decongestant action
- Alleviates nasal secretions
- Dye-free formulation
- Sugar-free formulation
- Excellent cinnamon flavor

DOSAGE

ADULT—2 tsp every 4 hours
not to exceed 6 doses in 24 hours

PEDIATRIC—2-5 years ½ tsp every 4 hours
6-12 years 1 tsp every 4 hours
not to exceed 6 doses in 24 hours

Mallinckrodt® Pharmaceuticals *Linking Chemistry to Medicine®*

Mallinckrodt, Inc.
St. Louis, MO 63147

Emergency department categorization

Ralph E. Cross, Jr

When we consider that more than 70 million people visited the nation's emergency departments last year, the message becomes increasingly clear: There must be a systematic approach to classifying and labeling the resources and capabilities of hospitals in a medical service area to treat emergent patients. Efforts to insure that the emergency medical services system be an integral part of the total health care system is also critically important.

The state of emergency medical services nationally has been summarized as follows:

> The provision of emergency medical care in the United States is not the product of a concerted, organized or coordinated effort to provide high quality emergency health services in all parts of the country. Instead, services of high quality exist and contrast with many others of low quality. The statistics of any two areas may vary considerably as do the planning, the resources, the knowledge and the concern. Growing interest nationally in this deplorable state has caused some significant changes. Facts are emerging which help to define the long neglected problems. Goals are being defined toward which planners may project their efforts. Advances are being made locally which increase the options available for those working to effect improvements. Problems at national, state, regional and local levels are being delineated and weighed to determine their priority for government activity.[1]

According to the National Research Council, trauma is the "neglected epidemic of modern society . . . the nation's most important health problem . . . a public health problem second only to the ravages of ancient plagues or world wars."[2] A concerted effort by every community to objectively and realistically categorize its emergency departments as an initial step in systematically planning an emergency medical service (EMS) system would improve the overall provision of emergency care.

The American Hospital Association has concluded:

> Categorization and regional planning must be seen as tools for improving emergency medical services in a community. Mere identification and labeling of emergency capabilities accomplishes nothing. Improvement in services can result only if categorization is part of an emergency services system—that is, an operation plan that allocates responsibility for the delivery of emergency medical care to the hospitals in the area; provides for adequate transportation and communication facilities, including immediate and appropriate care at the scene of the emergency and in transit; and establishes linkages among all components of the system.[3]

Duane Houtz, director of the Ochsner Foundation Hospital and chairman of the American Hospital Association's Committee on Emergency Medical Services, said in an April 1976 interview:

> Categorization of hospitals' emergency facilities should be the result of a comprehensive area or community-wide plan for emergency medical services. It should be tied in with the provision for adequate transportation, communication systems, transfer agreements between facilities, and in-house capabilities for emergency services.
>
> Even when a hospital has been labeled a specific category, indicating a certain level of emergency care it can provide, the conscious patient and his physician should be free to choose that facility or another if they so desire. Categorization should not force emergency patients into specified facilities against their desires.
>
> The lack of evaluative procedures and data may be considered as being one of the major limitations of those categorization schemes instituted to date. What feedback we do have, however, seems to indicate that those categorization systems which are effective are based on a total EMS system. It appears that effective emergency medical services and effective categorization often go hand-in-hand.

The primary purpose of any categorization plan is to identify the readiness of a hospital's emergency facility and its entire staff to receive, diagnose and treat emergent patients correctly and rapidly. Often persons requiring emergency care are confused as to the proper facility which will best meet their needs. Consequently, valuable time is lost when care could have been provided. Studies have shown that a high percentage of true emergencies can be treated successfully if treated rapidly and appropriately.

We must recognize that all hospitals in an area or region will not have the same emergency capability. It is simply unrealistic to assume all emergency departments will have board-certified specialists trained in emergency care on duty 24 hours each day. Consequently, there will not be one categorization model that will be universal for everyone, since facilities, population, economic, and geographic factors vary widely.

There will be certain common problems and concerns hospitals as well as communities initially must face before a categorization plan can be implemented. This article discusses them and their effect on hospitals in the context of (1) facilities, (2) patients, (3) economics, (4) legal aspects, (5) personnel, and (6) public relations and education.

Facilities

It is generally recognized that the single most important element in any EMS system is the hospital emergency department. As patterns of emergency care change and improvements take place in its provision, the need for categorization of department capabilities is emerging. Some facilities should expand significantly to accommodate projected increases in patients, and the increased complexity of cases. Other facilities which have been recently completed or are currently being designed will never be utilized as initially planned. Few architects have had the benefit of visualizing an emergency department operating under a categorization system. It is not difficult to modify lists of instruments, equipment and supplies for most emergency departments. However, the design of rooms and their location as related to other services of the hospital are critical to our current concepts of providing emergency care, and modifications frequently are extremely expensive.

A categorization system should be implemented in two stages. First, an inventory of the current facilities in the community or region must be taken, and each must be classified as to its current or projected use. The Emergency Medical Services Systems Act of 1973 (PL 93-154) established a grant program to states, local government, and nonprofit regional groups for planning and improving coordinated systems of emergency care.

Current thinking with regard to effective emergency department categorization appears to follow a three-level approach in terms of horizontal, vertical, and circular classifications.

Classifying emergency departments under the horizontal concept is accomplished by determining the degree of comprehensiveness among general emergency services, and the facilities are labeled as to their ability to provide basic or routine emergency treatment.

The vertical concept of categorization identifies hospitals as to their ability to provide specialty care in the following critical care areas: trauma, burns, high risk infants, poison, acute cardiac care, alcohol detoxification, drug overdose, and psychiatric emergencies.

There are advantages to the vertical categorization approach. First, specialized facilities can be located where demonstrated patient needs exist. Second, it permits more flexibility in planning an overall EMS system because provisions for accessibility, efficiency, and quality of care are inherent in the system. Third, it insures the availability of specialty care capability that may not be contained in horizontally categorized facilities.

The circular approach involves coordinating all emergency facilities and specialty care capabilities located within the boundaries of a regional EMS system.

The second stage of implementing a categorization plan appears to be the most difficult. Once agreement is reached on the categorization plan, it is essential from a comprehensive community planning standpoint to require that certain facilities be established, upgraded, or eliminated to effectively meet the optimal needs of the community. Many hospitals fear the effects of this approach on their institutions, and subconsciously or intentionally provide unrealistic information on the capabilities of their emergency departments. Hospitals many times are reluctant to admit any deficiencies in their provision of emergency service or any other aspect of patient care. Determination of specific categories for institutions will be a difficult process. However, the time and effort expended to insure the categorization plan is objective and realistic will result in overall improvements in the delivery of emergency care.

Patients

Unfortunately, individuals, in their fear, ignorance, or apathy, seek health care by the episode. They tend to perceive an emergency as any condition which requires immediate medical attention. Since the hospital emergency department serves as a point of entry into the health care system, many persons seek care for conditions that clinically are not emergencies. About 80% of those seeking emergency care are not seriously ill. Primary medical care simply cannot be delivered with optimal effectiveness in the emergency department because it is staffed, equipped, and geared toward providing episodic care.

Categorization of emergency departments would be an effective way to manage this problem. It would enable the hospital to provide emergency care according to its capabilities. The patient would also be a primary beneficiary of categorization in that the overall plan would be designed to effectively meet his needs. Determination of the best qualified emergency facilities would have a major impact not only by saving lives, but by reducing disability as well.

Economics

With the current means of financing emergency care, many hospitals will have serious financial concerns regarding categorization. In discussions with both physicians and administrators the following questions are most prevalent:

1. Will the effect of categorization decrease the number of hospital admissions and decrease inpatient census?
2. Will medical specialists such as orthopedic surgeons, neurosurgeons, obstetricians and gynecologists, and cardiologists currently utilizing one hospital desire to change their admitting practices based on the categorization plan put into effect? Will general surgeons utilizing one institution have to share their time (and loyalty) with those hospitals having a more comprehensive category?
3. How will the highly competitive situation in attracting residents be affected by categorization?
4. Will hospitals treat greater numbers of indigents and further escalate current deficits?
5. Will the institutions providing the most comprehensive emergency care be in a better position to receive private donations or public grants for inpatient facilities?

6. How will categorization affect contractual arrangements with certain industries to provide hospitalization for their employees?

7. Will a more restricted category cause a hospital's emergency department to be utilized by so few patients that it will become too expensive to operate?

These concerns on the part of physicians and administrators are certainly understandable, and cannot be ignored if a well defined and objective categorization plan is to be implemented.

Legal Aspects

Hospitals are becoming increasingly anxious about their tort liability. Both the frequency of claims and the size of the settlements create concern. The long delays in settling claims greatly compound the concern. In April 1976, Robert B. Cook, general counsel at Baylor University Medical Center, said of the legal implications involved with categorization:

"The malpractice crisis has compounded the hospital's perennial problem of assuring appropriate physician coverage in the emergency department. In my opinion, categorization of emergency departments, if accomplished rationally and objectively, will help alleviate the problem if states will enact legislation authorizing categorization and limiting liability of hospital and physician according to the intensity of emergency services available in the hospital."

Hospitals must know where they stand legally when the patient arrives at the emergency department and says he will not transfer to another hospital. What happens when the patient's private physician sends him to his own institution even though he knows it isn't properly prepared? Hospitals also need to know the consequences of a patient dying in transit from one emergency room to another.

Personnel

Provision of effective emergency care is contingent on the availability of qualified personnel. Although hospitals face serious problems providing nursing and technical personnel, the greatest hospital concern is appropriate physician availability.

A comprehensive study of emergency departments in Chicago stressed that no other single item is as important as the presence of a physician in the emergency department during evening hours. The literature also reflects that hospitals continually face a problem not only in terms of quality manpower. It is critical that the very valuable and scarce resource of medical skill be effectively utilized.

The small community hospital faces the problem of having a physician immediately available at or near the hospital. The larger hospital without residency programs in the emergency related specialties may become concerned about the difficulties of arranging coverage in those specialties.

A study completed in 1975 by the North Central Texas Council of Governments indicated glaring deficiencies in the availability and distribution of qualified personnel. In an eight-county area (Dallas, Denton, Collin, Hunt, Rockwall, Kaufman, Ellis, and Navarro) 84% of emergency care attendants, 88% of EMT's, 88% of registered nurses, and 91% of physicians were located in Dallas County. Some counties had fewer than five emergency care attendants and emergency medical technicians. Programs are under way to improve this problem through initial training and retraining of EMT's at junior colleges.

The health field is often accused of mismanaging its skilled resources and operating an inefficient nonsystem. A well planned emergency department categoriza-

tion system would not only bring forth an orderly system for emergency care, but also would provide for the most effective use of skilled medical manpower.

A network of successive categories of emergency departments will necessitate greatly improved communications systems and means of transportation. The development of a categorization system for area and regional hospitals will increase transportation distances and time as well as the frequency of interhospital transfers. These factors alone will require better vehicles, increased efforts in training of personnel, and a greatly expanded and improved radio communications system.

A well planned communications system is a critical and essential element in the overall provision of emergency medical services. It is the one mechanism that provides the patient with access to care. Cooperation and coordination between the various agencies to standardize a communications system is of utmost importance if effective care is to be provided.

Communication is a catalyst that insures the smooth functioning of other EMS subsystems. An effective categorization plan with well planned communications and transportation systems will, in my opinion, improve cooperation among hospitals and other agencies that are essential in providing emergency care.

Public Relations and Education

Hospitals and other agencies have a major responsibility to communicate any categorization plan to the public openly and honestly. The public must be continuously informed before and after the plan has been implemented. Hospitals have often said that the public has been shielded from much of the information about our institutions because of its confidential nature or legal implications. In my opinion, the public will accept the concept of categorization if they are informed that categorization is in their best interests and that an overall improvement in the provision of emergency care will result.

Public education will be difficult and will require major efforts. However, a past president of the National Association of Hospital Public Relations Directors said it may take at least a year of concentrated effort to get the concept across. He felt there would be no difficulty in selling categorization if:

1. We have a valid public posture that our goal is in the patient's best interest, and not our own; and
2. The concept is simple and is presented in every way possible: flyers in physicians' offices, public service spot announcements, pamphlets in emergency departments, payroll stuffers, notices in bank and department store statements, listings in front of the telephone books, etc.

The general public does not understand the capabilities of hospitals and their emergency departments. Hospitals gain a public image by emphasizing certain dramatic aspects of medical science, such as cobalt therapy or open heart surgery capability, and they develop these in response not necessarily to need, but often to political pressure and to the desire for status symbols. If a categorization plan is not effectively communicated to the public, the public will not support it. They must be continuously informed of the overall EMS system capabilities and needs.

Conclusion

Emergency department categorization is not a new concept; several communities

throughout the country have adopted categorization schemes. However, the criteria and implementation methods vary considerably.

Categorization is only one aspect in the delivery of effective emergency medical care. Labeling emergency facilities based on their capabilities accomplishes nothing if no provisions have been made for evaluation procedures. Overall improvements in emergency care can result only if categorization is part of a comprehensive emergency medical services system.

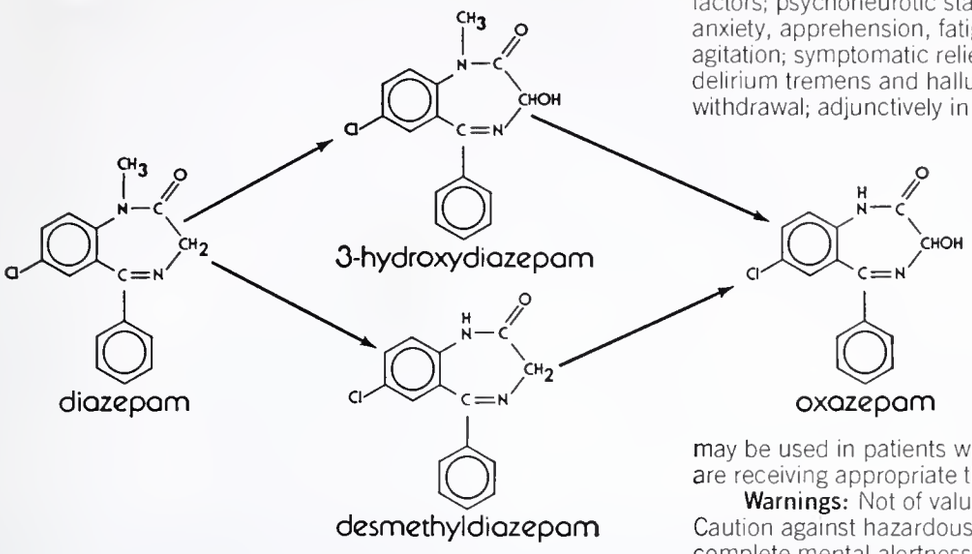
The advantages of a well planned, objective categorization system are numerous, and it is something that is in the best interest of patient care. Those of us who are committed to improvements in emergency care must intensify our efforts to provide leadership in this area.

References

1. Emergency Medical Services: Problems, Programs and Policies. Journal of the American College of Emergency Physicians. 5:285-296, 1976.
2. National Academy of Sciences. National Research Council: Accidental Death and Disability, Washington, DC, 1966.
3. American Hospital Association: Categorization of Hospital Emergency Services. Report of a conference, Chicago, American Hospital Association, 1973.

Mr. Cross, Associate Director, Baylor University Medical Center, 3500 Gaston Ave, Dallas, TX 75246.

A pharmacokinetic character all its own



Valium (diazepam) is a benzodiazepine with a distinctive pharmacokinetic profile

The pharmacokinetic profile of Valium is one of the characteristics that sets it apart from other benzodiazepines. Consider, in particular, the metabolic pathway of Valium. The three major metabolites of Valium exhibit significant pharmacologic activity—and so, of course, does the parent substance—diazepam itself. All combine to produce the characteristic clinical response seen with Valium. The response you have come to know, to want and to trust.

Pharmacokinetic studies also demonstrate that Valium has a pattern of absorption, distribution, metabolism and elimination that is reliable and consistent. And, although the pharmacokinetics of a drug cannot, at present, be specifically related to its clinical effects, it is clearly a factor that distinguishes one product from another by providing important insights into how each moves through the patient's body.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

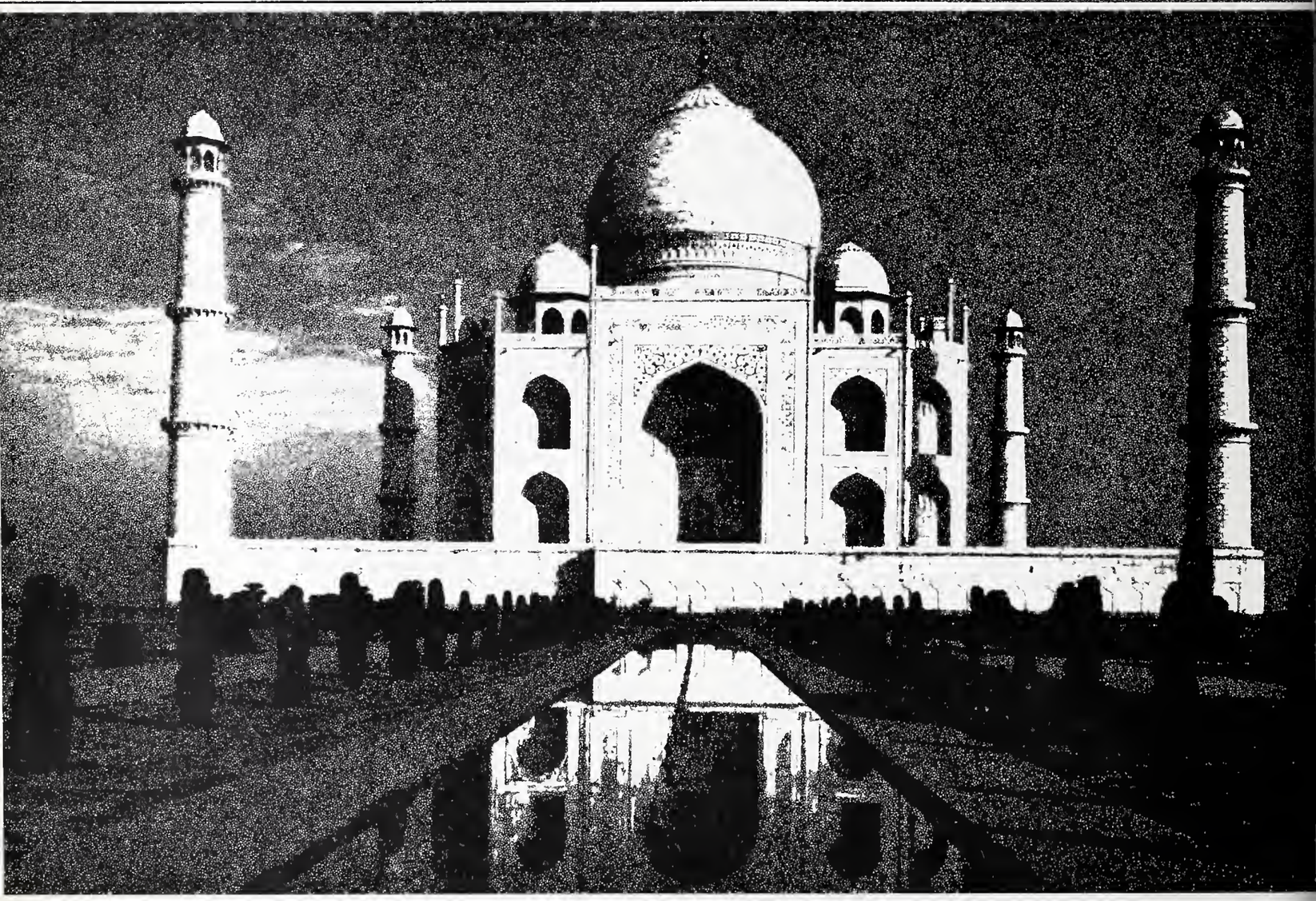
INTRAV®

Around The World Adventure

The Ultimate Travel Experience. A 34 day trip to:
Tokyo, Hong Kong, New Delhi, Agra, Kabul, Cairo, Istanbul, Jerusalem, Tel Aviv, and London
Departing Dallas-Fort Worth and Houston on September 13, 1977

Here is a deluxe non-regimented trip that takes you to the exotic lands of the world. You'll circle the globe following the sun with almost all daylight flights. You'll visit eight fascinating countries with time to unpack and re

Around The World Adventure . . . the most exciting and personally enriching travel experience of your lifetime . . . an outstanding quality trip for $4995. Don't miss it.



Send to: Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

Enclosed is my check for $ _____
($200 per person) as deposit

Name(s) _____
(LAST) (FIRST) (SPOUSE)

Home Address _____

City _____ State _____ Zip _____

A Non-Regimented INTRAV Deluxe Adventure

BREATHING WITH COMFORT.

Choledyl – a highly soluble, true salt of theophylline – rapidly relaxes bronchospasm to promote easier breathing. And, gastric discomfort is minimal.

Because Choledyl is more stable...more rapidly absorbed from the G.I. tract than aminophylline.

Available in both tablets and elixir for patients with obstructive lung disease.

Choledyl® (oxtriphylline) Tablets and Elixir CAUTION: Federal law prohibits dispensing without prescription. Each partially enteric coated tablet contains 200 mg or 100 mg oxtriphylline. Each teaspoonful of the elixir contains 100 mg oxtriphylline; alcohol 20%. *Indications.* Choledyl (oxtriphylline) is indicated for relief of acute bronchial asthma and for reversible bronchospasm associated with chronic bronchitis and emphysema. *Warning.* Use in pregnancy – animal studies revealed no evidence of teratogenic potential. Safety in human pregnancy has not been established; use during lactation or in patients who are or who may become pregnant requires that the potential benefits of the drug be weighed against its possible hazards to the mother and child. *Precautions.* Concurrent use of other xanthine-containing preparations may lead to adverse reactions, particularly CNS stimulation in children. *Adverse Reactions.* Gastric distress and, occasionally, palpitation and CNS stimulation have been reported. *Dosage.* Average adult dosage: Tablets – 200 mg, 4 times a day; Elixir – two teaspoonfuls, 4 times a day. *Supplied.* 200 mg yellow, partially enteric coated tablets in bottles of 100 (N 0047-0211-51) and 1000 (N 0047-0211-60); Unit Dose – 200 mg tablets (N 0047-0211-11); 100 mg red, partially enteric coated tablets in bottles of 100 (N 0047-0210-51). Elixir – bottles of 16 fl oz (1 pint) 474 ml (N 0047-0215-16). *Toxicity.* Oxtriphylline, aminophylline and caffeine appear to be more toxic to newborn than to adult rats. No teratogenic effects have been seen. Full information is available on request.

CH-GP-51-4/C

WC

WARNER/CHILCOTT
Division Warner-Lambert Company
Morris Plains, N.J. 07950

CHOLEDYL®
(OXTRIPHYLLINE)

SINGLE-ENTITY
BRONCHODILATION
MINIMAL GASTRIC DISCOMFORT

Famous Fighters

NEOSPORIN® Ointment
(polymyxin B-bacitracin-neomycin)
is a famous fighter, too.

Provides overlapping, broad-spectrum antibacterial action to help combat infection caused by common susceptible pathogens (including staph and strep).

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: Therapeutically (as an adjunct to systemic therapy when indicated) for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing. **CONTRAINDICATIONS:** Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components. **WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended. **PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

On the way to one Texas PSRO region

The physicians of Texas, in cooperation with most other health professionals, have been working for more than three years to bring to Texas a single, statewide Professional Standards Review Organization (PSRO).

What began as a proposed federal program has included designations, lawsuits, statewide polls, and hard fought successes for Texas physicians.

The federal government created PSROs to monitor medical services paid for by Medicare and Medicaid, to determine the need for patient hospitalization care at the appropriate level and at acceptable quality.

The federal program was instigated to insure that medical services conform to professional standards, that medical services are medically necessary, and that medical services are provided in the most economical manner.

In 1973, Texas Medical Association leaders met to plan how to deal with PSROs in Texas. They decided to seek a single area designation for Texas, a single PSRO.

For this reason the Texas Institute for Medical Assessment (TIMA) was formed. TIMA's purpose was to qualify for operating a statewide PSRO in Texas. Texas physicians reasoned that the TIMA plan would provide economics in administration, avoid wasteful duplication, have cooperation and participation, and still respect existing medical service areas and flow patterns.

TIMA was organized by licensed physicians and supported by the Texas Medical Association, the Texas Osteopathic Medical Association, Texas Hospital Association, Texas Osteopathic Hospital Association, Private Clinics and Hospital Association (now the American Federation of Hospitals), Texas Nursing Home Association, medical schools (MD and DO), and state agencies. All licensed physicians are eligible for TIMA membership.

Joseph T. Painter, MD, a Houston physician, now vice president for administration at The University of Texas M. D. Anderson Hospital and Tumor Institute, was installed as TIMA president.

The Department of Health, Education, and Welfare (HEW) had its first hearings to designate PSROs in Texas in August and October 1973.

Twice at the public hearings TIMA requested a government contract to organize a single PSRO throughout the state.

William Cherry, MD, HEW regional medical director, recommended a single area PSRO designation for Texas in August 1973.

No other proposals were submitted, and HEW regional director Floyd Norman, MD, made no recommendation.

However, both times the TIMA request was denied.

In March 1974, HEW established nine PSRO areas in Texas. The HEW designations were made in spite of the fact that 92% of the Texas physicians responding to a poll in January 1974 did not support the HEW proposed PSRO regions.

But, TIMA continued the fight for a single, statewide PSRO designation.

In May 1974, TMA filed suit against HEW's planned division of the state into nine designated PSRO regions. The suit was heard 18 months later.

In January 1976, US District Court Judge Jack Roberts of The Western District Court of the United States District Court, Austin Division, set aside the nine designated areas because of undue influence by Congress and Congressional staff on the decision and directed HEW Secretary David Mathews to reconsider the area designation procedure for Texas.

HEW filed notice of appeal of the case in March 1976. However, HEW later withdraw the appeal of the ruling that invalidated the area designation for PSROs in Texas.

In September and October 1976, HEW conducted an advisory poll of physicians in Texas to determine their preference for multiple local PSRO area designations or a single statewide PSRO area designation.

Ballots were mailed to each physician engaged in active practice in Texas.

Tabulated results of the poll showed that 13.8% favored local PSRO areas and 86.2% preferred a statewide PSRO designation.

Tabulated results of the Texas poll showed that 13.8% favored local PSRO areas and 86.2% preferred a statewide PSRO designation

There were 11,058 valid ballots cast, 1,526 votes favoring multiple PSROs, and 9,532 favoring a single statewide PSRO.

On Dec. 28, 1976, Secretary Mathews published in the *Federal Register* his proposal to designate Texas a single PSRO area.

With these words he announced the single designation: "After careful consideration of the Department's overriding desire to expedite the timely establishment of the PSRO program in Texas, and in light of the considerable delay that completion of the entire designation and statutory state poll processes would entail and the clear probability of the results of these processes, the Secretary proposes that the State of Texas be designated as a single PSRO area."

Secretary Mathews set a comment period that extended until January 27, 1977.

What now for Texas PSRO activities?

"We will work to reach the TMA House of Delegates 1973 goal of a single area designation for a Texas PSRO," Dr Painter said. TIMA will be preparing for establishment of the Texas PSRO, he said.

With these words he announced the single designation. ". . . The Secretary proposes that the State of Texas be designated as a single PSRO area."

In the near future, the request for proposals will be out, and TIMA will submit a planning application for the PSRO, Dr Painter said.

During the planning period TIMA will be considering PSRO membership development, medical data systems, development of review components criteria, and personnel, he said.

"Many advisory committees will be involved during the planning period," the TIMA president said.

"This year, 1977, is a critical one in determining the size and shape of a Texas PSRO. TIMA is ready and awaits the opportunity, pending the designation of Texas as a single PSRO area and TIMA as the contracting agency," Dr Painter said.

TIMA Board of Directors

Joseph T. Painter, MD, president
Houston

John H. Boyd, DO, president-elect
Eden

William F. Ross, MD, vice president
San Benito

Milton V. Davis, MD, treasurer
Dallas

Carmault B. Jackson, Jr., MD
San Antonio

Robert L. Peters, Jr., DO
Round Rock

Gerald P. Flannagan, DO
Denton

David Armbruster, DO
Pearland

Walter A. Brooks, MD
Quanah

Robert C. Hickey, MD
Houston

Ed W. Schmidt, MD
Pecos

John M. Smith, Jr., MD
San Antonio

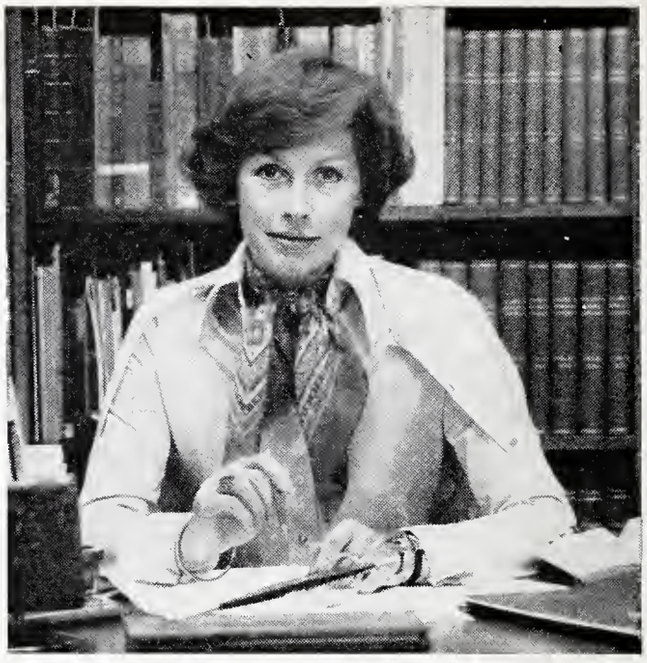
Ben R. Keller, Jr., MD
Arlington

L. S. Thompson, Jr., MD
Dallas

Louis W. Conradt, MD
Dallas

Charles Morris, MD
Dallas

THIS SPACE PROVIDED BY THE PUBLISHER AS A PUBLIC SERVICE.



She's a graduate of Columbia with a Masters in literature.

She's a vice president of a publishing company.

She's watched television programs and read dozens of pamphlets and articles about early cancer detection.

She has relatives and close, personal friends who have had mastectomies.

She's about as aware of the need for breast self-examination as any intelligent woman could be.

Yet she does not get regular checkups nor does she even examine her own breasts.

Why? Because her doctor never told her to.

But 92% of the women who receive personal instruction from their doctors *do* regularly practice BSE.*
You don't have to be told how important early detection is. But maybe you need this reminder that a few personal words from you can often mean more than the millions of words that go into publicity and television programs.

*Based on a Gallup study conducted for the American Cancer Society.

american cancer society®

Photo: Roy Solowinski

MEDICINE AND THE LAW

TEXAS DOCTOR'S COUNTERSUIT UNSUCCESSFUL

In the following case[1] a Texas doctor was unsuccessful in his effort to countersue the patient-plaintiff and his attorney for constructive contempt and invasion of privacy.

Facts

In 1974, a medical malpractice suit against Dr Wolfe was filed on behalf of Sanchez by his attorney, Arroyo. The suit asserted that Dr Wolfe, an orthopedic surgeon, committed negligent acts by failing to properly diagnose and treat Sanchez for injuries sustained in an accident.

In early 1975, the case was decided in Dr Wolfe's favor. Dr Wolfe then filed separate suits against Sanchez and Arroyo for filing a groundless and unfounded suit for medical malpractice.

In his countersuit, Dr Wolfe alleged that Sanchez and Arroyo knew, or should have known, that no cause of action existed against him, and yet they made allegations which they knew or should have known were untrue. Dr Wolfe alleged that Arroyo thereby showed that he meant to obstruct the administration of justice and bring the court system into disrepute.

Dr Wolfe alleged that both men conspired to bring an unfounded claim with the fixed purpose to injure Dr Wolfe, and that both men foresaw resulting damage to Dr Wolfe by filing the baseless action.

Dr Wolfe alleged that filing of the unfounded claim was a proximate cause of injury, and that he suffered mental trauma requiring psychiatric treatment. The suit prevented performance of his duties as an orthopedic surgeon, he alleged.

Dr Wolfe alleged that the suit exposed him to ridicule and embarrassment by his peers and colleagues resulting in their refusal to refer patients to him. Dr Wolfe also alleged that his insurance premiums were increased as a result of the suit.

In his suit, he sought $750,000 in damages for his embarrassment and probable loss of future earnings.

Ruling

The trial court ruled against Dr Wolfe in the countersuit, and the ruling was affirmed by the San Antonio Court of Civil Appeals. No appeal has been taken to the Texas Supreme Court.

Discussion

At the trial court level, Sanchez contended that the allegations by Dr Wolfe failed to allege a cause of action because under Texas law (according to Arroyo's interpretation) the sole penalty for wrongful prosecution of civil suits is imposition of court costs, unless there has been a seizure of the person or property of the countersuing party.

However, no reply to this contention was filed by Dr Wolfe in either the trial or appellate court. The San Antonio Court opinion states," (Dr Wolfe) makes no complaint as to the trial court's implied finding that he has no cause of action for malicious prosecution and we make no determination regarding such implied finding."

Instead, Dr Wolfe urged on appeal that his allegations were sufficient to plead a cause of action for constructive contempt and invasion of privacy.

The San Antonio court defined civil contempt proceedings as those instituted to preserve and enforce the rights of parties to suits and to compel obedience to orders and decrees made for their benefit. The San Antonio court reasoned that Dr Wolfe did not assert a cause of action for constructive contempt by alleging the filing of a groundless suit, there being no allegations that Arroyo violated any order of court in filing the suit.

Texas appellate courts have recognized thus far two types of invasion of privacy as constituting an actionable tort. Those are intrusion through wiretapping and appropriation through unauthorized exploitation of a person's name and likeness for commercial purposes.

To those types Dr Wolfe attempted to add invasion of privacy by reason of filing a groundless suit against him, pointing to authorities that speak of "publicity which places the (countersuing) plaintiff in a false light in the public eye."

In rejecting this approach, the San Antonio court wrote, "While the question has never been considered in Texas in relation to a cause of action for invasion of privacy, it has been held in other jurisdictions that communications in judicial proceedings are absolutely privileged and are immune from an action for invasion of privacy . . . This absolute privilege for judicial proceedings has been recognized in Texas in other suits . . . The trial court did not err in concluding that (Sanchez and Arroyo) are not liable for an invasion of privacy because of the allegations contained in the suit filed against (Dr Wolfe)."

Conclusion

What Wolfe v. Arroyo probably means to the prospect of successful physician counterlitigation under present Texas law is exclusion of constructive contempt and invasion of privacy as supporting legal theories. This leaves open the question of applicability of other legal theories including malicious prosecution, negligence (willful/wanton), and barratry.

Jack Maroney, Will Barber
Brown, Maroney, Rose, Baker & Barber
TMA Legal Counsel

---

[1]Wolfe v. Arroyo, No. 15647, San Antonio Civil Court of Appeals, October 1976.

Medical Newsmakers

MARGERY W. SHAW, MD, JD, acting dean of the Graduate School of Biomedical Sciences of the University of Texas Health Science Center at Houston, and director of the school's Medical Genetics Center, is the new vice president and president-elect of the Genetics Society of America. The society brings together geneticists working on microorganisms, plants, animals and man. Dr Shaw is internationally known for her studies of human chromosomes and legal issues in genetics and medicine. She coordinates teaching and research at the Medical Genetics Center.

JOHN P. McGOVERN, MD, Houston, has been presented an honorary Doctor of Humane Letters from Emerson College in Boston. Dr McGovern is the director of The McGovern Allergy Clinic and chairman of the Texas Allergy Research Foundation. He is also chairman of the department of history of medicine and professor of allergy at the University of Texas Graduate School of Biomedical Sciences and professor of pediatric allergy and microbiology at the Baylor College of Medicine in Houston.

ROBERT F. BUTTS is the new executive vice president and ROY B. EVANS, JR, is the new executive director of the Southern Medical Association. Butts, executive director since 1961, has also served as executive secretary and treasurer and has been managing editor of the *Southern Medical Journal* since 1960. Evans joined the Southern Medical Association in 1960 and has served as business manager and assistant executive director.

J. FRED MULLINS, MD, has been named president of the American Board of Dermatology. Dr Mullins is a professor and chairman of the Department of Dermatology at the University of Texas Medical Branch at Galveston.

After serving on the Baylor College of Medicine faculty for 30 years, the last 22 as professor and head of the division of plastic surgery, S. BARON HARDY, MD, has been named Professor Emeritus. Chosen to succeed Dr Hardy is MELVIN SPIRA, MD, a former student under Dr Hardy. Accomplishments of the division under Dr Hardy's leadership include the silicone fluid immersion therapy for the treatment of burns, development of a silicone breast prosthesis, development of new methods for treatment of facial paralysis, and establishment of a laboratory for teaching of microvascular surgical techniques.

SIDNEY SCHNUR, MD, chief of electrocardiography at St. Joseph's Hospital in Houston, has been elected vice president of the American Heart Association. In accepting the vice presidency, Dr Schnur simultaneously becomes chairman of the Southwest Region of the American Heart Association. He is former president of the Harris County Medical Society.

Houston physician WARREN J. RAYMER, MD, is the new treasurer of the American Association for Clinical Immunology and Allergy.

Margery W. Shaw, MD, JD

John P. McGovern, MD

DR JOHN SCHERMERHORN, dean of The University of Texas School of Allied Health Sciences in Dallas, has been elected chairman-elect of the Council of Educational Institutions of the American Society of Allied Health Professions. He has held a variety of positions in the council, most recently serving as a member of the steering committee and chairman of a task force on accreditation. The council serves as a national voice for allied health education in essentially the same way that the Association of American Medical Colleges does for medical education.

The American College of Chest Physicians has inducted 250 physicians and surgeons, including eight from Texas, as new Fellows of the College. Those inducted include KIT V. AROM, MD, San Antonio; FREDERICK R. BODE, MD, San Antonio; WILLIAM S. BYERS, MD, Texas City; KARAMAT V. CHOUDHRY, MD, Fort Worth; DAVID L. RICE, MD, Houston; MELVIN J. SPICER, MD, El Paso; J. PETER THIELE, MD, Dallas; and KENNETH M. UNGER, MD, Houston.

Gov Dolph Briscoe has reappointed three members of the Texas Coordinating Commission for State Health and Welfare Services for two-year terms. The governor named Fort Worth banker F.E. Engelman, CECIL G. HAROLD, MD, a Houston surgeon, and PER H. LANGSJOEN, MD, a Temple cardiologist, to serve through Dec 31, 1978.

"Doctor, you'll enjoy talking to my husband. He has so many good ideas on how to straighten out the medical profession."

DOCTORS ARE TALKING ABOUT THE PRACTICAL WAY TO LOWER CHOLESTEROL

Choloxin®
(Sodium Dextrothyroxine)

And for good reasons. Diet alone doesn't always work. CHOLOXIN® (sodium dextrothyroxine) has proved itself to be an effective cholesterol lowering adjunct to diet in euthyroid, non-cardiac patients. It has undergone ten years of clinical trials and eight years of practice. The clinical trials consisted of 337 clinical studies involving over 3,000 hypercholesterolemic non-cardiac patients. It is among the most thoroughly evaluated drugs ever presented to physicians.

Practical, too, is the one-tablet-a-day dosage regimen. It encourages patient cooperation, and it's economical for long-term therapy.

CHOLOXIN (sodium dextrothyroxine) lowers cholesterol 15% to 35%, and keeps it down with most patients. *(Data on file, Flint Laboratories).*

Interested in receiving more information about lipid lowering? Write us or contact your Flint representative. We'll be glad to supply you with a complete product portfolio and samples for your evaluation.

NOTE: See following page for full prescribing information.

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

Choloxin® (Sodium Dextrothyroxine)

Effectively Lowers Elevated Cholesterol With Convenient Once-A-Day Dosage

Four strengths 1, 2, 4, and 6 mg are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage.

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below.

	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1.0-2.0 mg.	1.0-2.0 mg.	4.0-8.0 mg.	4.0-8.0 mg.
Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac	1.0 mg.	1.0 mg.	4.0 mg.	4.0 mg.

Choloxin®
(Sodium Dextrothyroxine)

Description

CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as D-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions

The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN (sodium dextrothyroxine) stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic end-products do not accumulate in the blood.

Indications

This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Before prescribing, note the following:

Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN (sodium dextrothyroxine) is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively, in patients with significant myocardial impairment. CHOLOXIN (sodium dextrothyroxine) dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications

The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease; history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings

CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN (sodium dextrothyroxine) is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN (sodium dextrothyroxine) is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN (sodium dextrothyroxine). As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN (sodium dextrothyroxine) than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN (sodium dextrothyroxine) in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may not be advisable or possible to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN (sodium dextrothyroxine) therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age

Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions

It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN (sodium dextrothyroxine) therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions

The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN (sodium dextrothyroxine); a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN (sodium dextrothyroxine) potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration

For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is approximately 0.1 mg (100 mcg) per kilogram. The initial daily dosage should be approximately 0.05 mg (50 mcg) per kilogram to be increased in up to 0.05 mg (50 mcg) per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied

CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

"I Cannot Tell A Lie – It Does Taste Like BANANAS!"

When acute, non-specific diarrhea causes the stomach to revolt, the tasteful counterattack is Donnagel®-PG. Donnagel-PG provides all the benefits of paregoric and—instead of that unpleasant paregoric taste—a delicious banana flavor good enough to make even an expert flip his wig.

Now with child-proof closure

Donnagel®-PG℣

Donnagel with paregoric equivalent

For diarrhea

Each 30 ml. contains:	
Kaolin	6.0 g.
Pectin	142.8 mg.
Hyoscyamine sulfate	0.1037 mg.
Atropine sulfate	0.0194 mg.
Hyoscine hydrobromide	0.0065 mg.
Powdered opium, USP (equivalent to paregoric 6 ml.) (warning: may be habit forming)	24.0 mg.
Sodium benzoate (preservative)	60.0 mg.
Alcohol, 5%	

A·H·ROBINS A.H. Robins Company, Richmond, Virginia 23220 Member of Certified Medical Representatives Institute

COUGHS ARE BAC
382
NORFOLK AND WESTERN
DO NOT WALK
NOR TRESPASS ON
THE BRIDGE
Robitussin
Robitussin-DM
Robitussin-CF
Robitussin-PE

CLEAR THE TRACT

in coughs of colds, "flu" and u.r.i.— clear the tract with the famous Robitussin® Line!

The 5 members of the Robitussin® family all contain the expectorant, guaifenesin, to help clear the lower respiratory tract. Guaifenesin works systemically to help stimulate the output of lower respiratory tract fluid. This enhanced flow of less viscid secretions promotes ciliary action and makes thick, inspissated mucus less viscid and easier to raise. As a result, dry, unproductive coughs become more productive and less frequent.

◀ *OUR PHOTO: Norfolk & Western Branch Train No. 202 west bound near Alvarado, Va (Oct., 1956). This line reaches the highest point of any railroad East of the Rockies (elevation 3,577 ft.) with a minimum grade of 3%. It crosses 108 bridges, some 700 ft. long! Photo by O. Winston Link.*

For productive and unproductive coughs

Robitussin®

Each 5 ml teaspoonful contains:
Guaifenesin, NF ..... 100 mg
Alcohol, 3.5%

For severe coughs

Robitussin A-C®

Each 5 ml teaspoonful contains:
Guaifenesin, NF ..... 100 mg
Codeine Phosphate, USP ..... 10.0 mg
(warning: may be habit forming)
Alcohol, 3.5%

Non narcotic for 6-8-hour cough control

Robitussin-DM®

Each 5 ml teaspoonful contains:
Guaifenesin, NF ..... 100 mg
Dextromethorphan
Hydrobromide, NF ..... 15 mg
Alcohol, 1.4%

Decongests nasal passages and sinus openings as it helps relieve coughs

Robitussin-PE®

Each 5 ml teaspoonful contains:
Guaifenesin, NF ..... 100 mg
Pseudoephedrine
Hydrochloride, NF ..... 30 mg
Alcohol, 1.4%

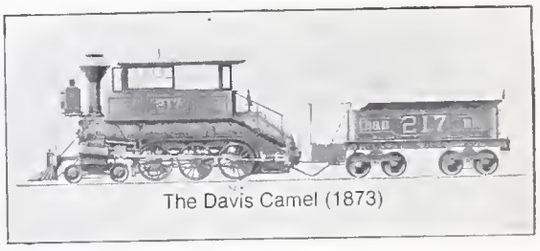
Decongestant action helps control cough and clear stuffy noses and sinuses. Non narcotic.

Robitussin-CF®

Each 5 ml teaspoonful contains:
Guaifenesin, NF ..... 50 mg
Phenylpropanolamine
Hydrochloride, NF ..... 12.5 mg
Dextromethorphan
Hydrobromide, NF ..... 10 mg
Alcohol, 1.4%

All Robitussin formulations available on your Rx or Recommendation.

For many years Robins has spotlighted the expectorant action of the Robitussin cough formulations by featuring action photographs of steam engines like the one on the preceding page. In keeping with this tradition, last year the company commissioned a well-known illustrator to render full-color drawings of several classic locomotives . . . accurate to the minutest detail. Chances are you requested and received the first locomotive in this series, The William Mason, last winter. Now, the second one is available. (See below). To order your print suitable for framing, write "Robitussin Clear-Tract Engine #2" on your Rx pad and mail to "Vintage Locomotives," Dept. T4, A. H. Robins Company, 1407 Cummings Drive, Richmond, Va. 23220.



The Davis Camel (1873)

A·H·ROBINS

A. H. Robins Company, Richmond, Va. 23220

Medicine in literature

EDITOR'S NOTE: This month's bibliography, prepared by the staff of TMA's Memorial Library, lists publications related to ultrasonography. These and other publications pertaining to ultrasonography are available from the Memorial Library.

ULTRASONOGRAPHY

Ablow RC, Taylor KJW, Hobbins JC: Diagnostic radiography and ultrasound in the perinatal intensive care unit. *Clin Perinatol* 3(2):403-424, 1976.

Baum G: *Fundamentals of Diagnostic Ultrasonography*. New York, Putnam, 1975.

Busser JH: *A 5-Year Research and Development Agendum for Ultrasonic Imaging Diagnostic Instrumentation; Final Report of AEMB Task Groups on Ultrasonic Imaging Diagnostic Instrumentation. April 1975 Technical Report*. Chevy Chase, Md, Alliance for Engineering in Medicine and Biology, 1975.

Doust BD: The use of ultrasound in the diagnosis of gastroenterological disease. *Gastroenterology* 70(4):602-610, 1976.

Goldberg BB: *Diagnostic Ultrasound*, MEDCOM slide set.

Goldberg BB: *Diagnostic Ultrasound in Clinical Medicine*. New York, MEDCOM Press, 1973.

Gordon D: *Ultrasound as a Diagnostic and Surgical Tool*. Baltimore, Md, The Williams & Wilkins Co, 1964.

Holder JC: B-mode ultrasonic scanning. *J Arkansas Med Soc* 72(3):130-136, 1975.

Kern MJ: The use of ultrasound in the assessment of intrauterine fetal death: A review. *Mt Sinai J Med NY* 43(3):281-290, 1976.

McGregor JC, Pollock JG, Anton HC: The diagnosis and assessment of abdominal aortic aneurysms by ultrasonography. *Ann R Coll Surg Engl* 58(5):388-392, 1976.

McQuown DS: Ocular and orbital echography. *Radiol Clin North Am* 13(3):523-541, 1975.

Perkins RP: Antenatal assessment of fetal maturity; a review. *Obstet Gynecol Surv* 29(6):369-384, 1974.

Perri AJ, Morales JO, Feldman AE, et al: Necrotic testicle with increased blood flow on Doppler ultrasonic examination. *Urology* 8(3):265-267, 1976.

Piiroinen O: Studies in diagnostic ultrasound; size of the non-pregnant uterus in women of childbearing age and uterine growth and fetal development in the first half of normal pregnancy. *Acta Obstet Gynecol Scand* 46(suppl):1-60, 1975.

Queenan JT, Kubarych SF, Douglas DL: Evaluation of diagnostic ultrasound in gynecology. *Am J Obstet Gynecol* 123(5): 453-465, 1975.

Sanders RC, Jeck DL: B-scan ultrasound in the evaluation of renal failure. *Radiology* 119(1):199-202, 1976.

Sanders RC: The place of diagnostic ultrasound in the examination of kidneys not seen on excretory urography. *J Urol* 114: 813-821, December 1975.

Sanders RC, Curtin MJ, Tapper AJ: Ultrasound in the management of elective abortion. *Am J Roentgenol Radium Ther Nucl Med* 125(2):469-473, 1975.

Strandness DE Jr, Sumner DS: Applications of ultrasound to the study of arteriosclerosis obliterans. *Angiology* 26(2):187-198, 1975.

Tenner MS, Wodraska GM: *Diagnostic Ultrasound in Neurology; Methods and Tech-*.

niques. New York, John Wiley & Sons, 1975.

Thompson HE: Evaluation of the obstetric and gynecologic patient by the use of diagnostic ultrasound. *Clin Obstet Gynecol* 17(4):1-25, 1974.

Ultrasound in managing the high-risk pregnancy, in: Spellacy WN (ed): *Management of the High-Risk Pregnancy*. Baltimore, University Park Press, 1976, pp 137-167.

IN THE TMA LIBRARY

Bockus HL, Berk JE, Haubrich WS, et al (eds): *Gastroenterology, Volume 3*, ed 3. Philadelphia, WB Saunders Co, 1976.

Burrow GN, Ferris TF: *Medical Complications During Pregnancy*. Philadelphia, WB Saunders Co, 1975.

Gell PGH, Coombs RRA, Lachmann PJ (eds): *Clinical Aspects of Immunology*, ed 3. Oxford, England, Blackwell Scientific Publications, 1975.

Mirkin BL (ed): *Perinatal Pharmacology and Therapeutics*. New York, Academic Press, 1976.

Moschella SL, Pillsbury DM, Hurley HJ Jr: *Dermatology, Volume 1*. Philadelphia, WB Saunders Co, 1975.

Novak ER, Jones GS, Jones HW Jr: *Novak's Textbook of Gynecology*. Baltimore, Md, The Williams & Wilkins Co, 1975.

Parkes WR: *Occupational Lung Disorders*. London, Butterworth & Co (Publishers) Ltd, 1974.

Steinberg FU (ed): *Cowdry's The Care of the Geriatric Patient*, ed 5. St Louis, The CV Mosby Co, 1976.

Goodhart RS, Shils ME (eds): *Modern Nutrition in Health and Disease*, ed 5. Philadelphia, Lea & Febiger, 1973.

Mahler MS, Pine F, Bergman A: *The Psychological Birth of the Human Infant*. New York, Basic Books, Inc, Publishers, 1975.

Robbins SL: *Pathologic Basis of Disease*. Philadelphia, WB Saunders Co, 1974.

Walker WF: *Color Atlas of General Surgical Diagnosis*. Chicago, Year Book Medical Publishers, Inc, 1976.

Wintrobe MM, Lee GR, Boggs DR, et al: *Clinical Hematology*, ed 7. Philadelphia, Lea & Febiger, 1974.

Hefnawi F, Segal SJ (eds): *Analysis of Intrauterine Contraception*. Amsterdam, North-Holland Publishing Co, 1975.

Mancini RE, Martini L (eds): *Male Fertility and Sterility*. London, Academic Press, 1974.

Sciarra JJ, Droegemueller W, Speidel JJ (eds): *Advances in Female Sterilization Techniques*. Hagerstown, Md, Harper & Row.

IN THE FILM LIBRARY

Corman ML, Veidenheimer MC (Narrators): *Diseases of the Anus, Rectum and Colon, Part II: Nonspecific Inflammatory Bowel Disease*. Medcom, 100 color slides (2″ x 2″), 1976.

Kaye JJ, Ghelman B, Schneider R, et al (Narrators): *Arthrography of the Knee*. Medcom, 100 color slides (2″ x 2″), 1975.
Houck PW (Narrator): *Pediatric Neonatology*. Medcom, 100 color slides (2″ x 2″), 1973.

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

L.W. KRUMPERMAN
Philadelphia, 1920-1976

TROY F. LONG
Dallas, 1909-1976

J.S. SWEENEY
Dallas, 1896-1976

N.F. WALKER
El Paso, 1905-1976

G.R. WILLIAMS
Dallas, 1895-1976

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

TEXAS MEDICAL MEMORIAL LIBRARY FUND

1801 N. Lamar Blvd., Austin, Texas 78701

I enclose the amount of $_____. Given in Memory of _____

Please send remembrance card to:

Name _____

Address _____

City and State _____

Donor Information:

Name _____

Address _____

City and State _____

Deaths

L.W. Krumperman, MD

Dr LeRoy Wright Krumperman died May 28, 1976, in Philadelphia.
Dr Krumperman, 55, moved to Dallas in 1975 and was chief of the anesthesia service at the Veterans Administration Hospital there. From 1951 to 1975 he was professor and chairman of the department of anesthesiology at Temple University School of Medicine, Philadelphia.
The physician was a native of Ogden, Utah, and attended the University of Utah, Salt Lake City. In 1944, he was graduated from Temple University School of Medicine, Philadelphia. His internship and anesthesiology residency also were at Temple University.
From 1946 to 1948 Dr Krumperman served in the US Navy at Great Lakes Naval Hospital, Great Lakes, Ill. In 1948, he returned to Philadelphia to join the medical staff at Temple University.
The doctor's professional memberships included the Dallas County Medical Society, American Medical Association, American Society of Anesthesiologists and American College of Anesthesiologists.
Surviving are his sons, L.W. Krumperman, Jr, MD, Mons, Belgium, and Kurt M. Krumperman, Charlottesville, Va.

Troy F. Long, MD

Dr Troy Frank Long, a member of Texas Medical Association since 1942, died June 22, 1976. He had practiced surgery and gynecology in Dallas 35 years, and was on the staff of Methodist Hospital.
Dr Long, 67, was a native of Lowell, Ark. He attended Tulane University, New Orleans. In 1938, he received his MD from Tulane University School of Medicine. He completed his internship at St Paul Hospital, Dallas, in 1939, and began his private practice in Holdenville, Okla, the same year. In 1941, Dr Long returned to Dallas.
The surgeon was a member of the Dallas County Medical Society, Southern Medical Association and the American Medical Association. He was past president of the Southern Clinical Hypnosis Society (four terms) and the Dallas Exchange Club. He also was a member of the Lakewood Country Club.
Surviving Dr Long are his wife, Madeline Charlotte Long, Dallas; sons, John A. Long, Dallas, and Troy N. Long, Denver; daughters, Elizabeth Long Lasater, Houston; Rebecca Long Palnik, New York; and Genie McCartney, Midland, Tex; brother, Gerald D. Long, MD, Dallas; and 10 grandchildren.

Dr Krumperman

Dr Long

J. S. Sweeney, MD

Dr James Shirley Sweeney, an honorary member of Texas Medical Association since 1968, died in Dallas June 25, 1976.
Dr Sweeney was widely known as the founder of the Southwestern Diabetic Foundation, the Sweeney Diabetic Foundation and Camp Sweeney for diabetic youth. He also was associate professor of clinical medicine at Baylor College of Medicine, Southwestern Medical School and the University of Colorado School of Medicine.
He was an attending physician at Baylor University Medical Center and Gaston Episcopal, Methodist Central, St Paul, Parkland Memorial and Medical Arts hospitals.
Dr Sweeney was a native of Waco and spent his youth in Gainesville, Tex. He received his BA and MA degrees from Texas Christian University in Fort Worth. In 1921 he was graduated magna cum laude from Vanderbilt University School of Medicine.
Dr Sweeney continued his education at The Johns Hopkins School of Medicine in Baltimore, where he received both Master of Health and Doctor of Science degrees.
His internship and residency were at Baylor University Hospital in Dallas. In

Dr Walker

1939, Dr Sweeney received an honorary Doctor of Laws degree from TCU.
In 1925, the physician began his internal medicine practice in Dallas. He remained in Dallas until 1942, when he enlisted in the Army medical corps for the remainder of World War II. He had attained the rank of colonel when he was honorably discharged.
From 1946 to 1947, Dr Sweeney was medical manager of the Veterans Administration Hospital in Fort Logan, Colo. He practiced in Gainesville, Tex, from 1947 to 1953, when he returned to Dallas.
Dr Sweeney was a member of the American Medical Association, Southern Medical Association, American Association for the Advancement of Science, Texas Academy of Internal Medicine, American Diabetes Association, American Association for the Study of Internal Secretions, American College of Physicians and Dallas County Medical Society. He also was a past president of the Dallas Southern Clinical Society, Texas Club of Internists and Texas Society for Mental Hygiene. He was founder and first president of the Texas Diabetes Association, a Mason and a member of Alpha Omega Alpha.
Surviving are his wife, Adelia Jane Denison Sweeney, Dallas, and son, Denne Sweeney, Rupert, Idaho.

N.F. Walker, MD

Dr Newton Field Walker, 71, died Aug 12, 1976, at Providence Memorial Hospital, El Paso, where he had been a staff member since 1940.
Dr Walker, a native of Fleetwood, Okla, was an EENT specialist. He was a graduate of Baylor College of Medicine. His internship was at the California Lutheran Hospital, Los Angeles, and his residency was at the Ventura County Hospital, Ventura, Calif.
He undertook postgraduate studies at the New York Eye and Ear Infirmary and at Presbyterian Hospital (affiliated with Columbia University), New York.
Dr. Walker was a veteran of World War II and the recipient of a Bronze Star for his service with the North Sector General Hospital in Hawaii.
He was a fellow of the International College of Surgeons, a life member of the New York Academy of Science and a member of the Pan American Association of Ophthalmology, American Medical Association and Southern Medical Association. During 1955-1956, Dr Walker was president of the El Paso County Medical Society.
Surviving are Dr Walker's wife, Helen Hellmuth Walker, and daughter, Nancy Crowson, both of El Paso; brother, Morgan Walker, Clearwater, Fla; sister, Edith Walker Forbes, Gotebo, Okla, and two grandchildren.

G.R. Williams, MD

Dr George Raworth Williams, an honorary member of Texas Medical Association and Dallas County Medical Society, died in Dallas July 30, 1976.
Dr Williams retired in 1965 after practicing urology in Dallas 41 years.
Dr Williams, who was 81 at the time of his death, was an active polo player until age 72. He was a member of the winning team of the 1956 National Open Championship and, in 1958, captained the Dallas Athletic Club polo team when it won the National Open. At the age of 63, in 1958, he was named Dallas' Sportsman of the Month by the Dallas Chamber of Commerce Athletic Committee.
Dr Williams' professional memberships included the American Medical Association, Dallas Southern Clinical Society, American College of Surgeons, American Urology Society—South Central Section and Dallas Urological Society.
The native of Childress, Tex, attended The University of Texas at Austin. He was graduated from Columbia University College of Physicians and Surgeons in New York City in 1920, and interned at St Vincent's Hospital, also in New York City. After completing urology and surgery residencies at St Vincent's and a surgery residency at Bellevue Hospital in New York City, Dr Williams began his urology practice in Dallas in 1924.
Dr Williams is survived by his wife, Cadine Massey Williams, Farmer's Branch, Tex.

BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT-OUTPATIENT
DEPARTMENT OF ADOLESCENT PSYCHIATRY

A Private 115 bed psychiatric hospital located in Oak Cliff on 18 acres amidst natural wooded surroundings. A multi-approach treatment center of neurologic and all psychiatric disorders. Treatment modalities include Somatic Therapy, Milieu Therapy, Chemotherapy, Individual and Group Therapy and Behavior Modification. Complete facilities for OT-RT under the division of trained personnel. An individually directed program based on full diagnostic evaluation and actual performance administered by a staff skilled in special education and problems of the adolescent and young adult.

PSYCHIATRY

Jackson H. Speegle, M.D.
Fred H. Jordan, M.D.

Joseph H. Lindsay, M.D.
John T. Holbrook, M.D.

PSYCHOLOGY

George R. Mount, Ph.D.

Tom I. Payton, M.S.
Patrick R. Barnes, M.S.

DIRECTOR OF NURSES
Nita Ivey, R.N.

DIRECTOR OF EDUCATION
William E. Nix, Ph.D.

SOCIAL SERVICES
Beth Rutherford, M.S.W.

COURTESY STAFF

O.T. AND R.T. THERAPY
Director
Chequita Dian Badger, B.S.

1353 N. WESTMORELAND AVENUE. DALLAS, TEXAS 75211 **214 331-8331**

MEDICAL ARTS CLINIC ASSOCIATION of corsicana

DERMATOLOGY & SYPHILOLOGY
JOSEPH M. GLICKSMAN, M.D., F.A.A.D.*
J. D. SMITH, M.D., F.A.A.D.*

EAR, NOSE, & THROAT
PHILLIP M. AWTREY, M.D., F.A.A.O.O.*

GENERAL & VASCULAR SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D., F.A.C.S.*

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
ALLEN M. JONES, M.D.*
JOHN D. NELSON, M.D.*
L. BRYAN COTTON, JR., M.D.*
KENT ROGERS, M.D.

FAMILY PRACTICE DEPARTMENT
ENNIS, TEXAS
W. B. KINZIE, M.D.*

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
W. GENE MURFF, M.D., F.A.C.O.G.*
NEAL GREEN, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D., F.A.A.O.O.*

ORTHOPAEDIC SURGERY
WALLACE E. LOWRY, JR., M.D.*
JAMES A. DOTSON, M.D.*

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D., F.A.A.P.*

UROLOGY
WILLIAM V. HALL, M.D.*

EXECUTIVE DIRECTOR
DON L. BOWEN, M.G.M.A.

* DIPLOMATE OF THE AMERICAN BOARD

TRAVIS CLINIC FOUNDATION AND TRAVIS CLINIC ASSOCIATION

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D., Emeritus
Ken E. Kuykendall, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
Mary A. Bone, M.D.
J. A. Armstrong, M.D.
D. B. Turner, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Pediatrics:
M. L. Gray, M.D.
D. D. DeWitt, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

Podiatry:
Daniel H. Phelps, D.P.M.

Psychology:
Charles T. Fries, Ed.D.

Business Manager:
Gerald L. Burks

Ben H. Quinney, M.D.

Announces The CONVERSION Of His Office

For The Practice Of

Hematology And Medical Oncology

To Consultation Only

865 Margaret Place

Shreveport, Louisiana 71101

By Appointment Only

Telephone
Office (318) 222-1006

THE MALPRACTICE CRISIS

MANY MAJOR COMPANIES HAVE QUIT OR WILL SOON QUIT WRITING PROFESSIONAL LIABILITY INSURANCE. IF YOU CANNOT SECURE, OR CANNOT RENEW YOUR COVERAGE, CONTACT JOE NIGRELLE, 512 - 341-2564.

Suite 518 - GPM Building - North Tower
800 N.W. Loop 410
SAN ANTONIO, TEXAS 78212
AC 512 - 341-2564

JOE NIGRELLE INSURANCE AGENCY

1007 West 31st Street, Austin, Texas 78705
AC 512 452-0189 Kirke Jeffrey

Professional Liability • Office Liability • Physician Equipment Floaters • Fire and Homeowners • Automobile • Farm Insurance • Life, Accident and Sickness, Disability Income • Malpractice Insurance.

WELCOME TO HOUSTON

1977 ANNUAL SESSION MAY 12-15, HOUSTON
TEXAS MEDICAL ASSOCIATION

FEATURING

52 GUEST SPEAKERS plus 350 special and TMA-member speakers

21 SECTION PROGRAMS: Allergy, Colon and Rectal Surgery, Digestive Diseases, Diseases of the Chest, Family Practice, Internal Medicine, Neurology, Neurological Surgery, Nuclear Medicine, Obstetrics and Gynecology, Ophthalmology, Otolaryngology, Pathology, Pediatrics, Physical Medicine and Rehabilitation, Plastic, Reconstructive and Maxillofacial Surgery, Psychiatry, Public Health, Radiology, Surgery, Urology.

AMA-TMA POSTGRADUATE COURSES Scheduled Sunday, May 15, 8 a.m.-1 p.m. Each course acceptable for five hours Category 1 credit, AMA Physician's Recognition Award. Fee: $55. (Registration information will be sent to membership in separate mailing.)

Acid-Base, Fluid and Electrolyte Balance • Cardiovascular Disease—Diagnosis, Management of Acute Patient • Office Dermatology • Office Gynecology • Office Orthopaedics • Pediatric Emergencies

20 CURBSTONE CONSULTATIONS Person-to-person conversational discussions of cases and problems of general medical interest.

13 CONTINENTAL BREAKFAST PRESENTATIONS Join guest speakers for coffee, rolls, and short lectures Friday and Saturday mornings. Then participate in the informal half-hour discussion period following.

30 SPECIALTY SOCIETY PROGRAMS • 8 SPECIAL COMMITTEE SYMPOSIUMS • 160 SCIENTIFIC AND TECHNICAL EXHIBITS • FORUM OF ORIGINAL RESEARCH • PHYSICIANS' AND SPOUSES' ART EXHIBITION

SPORTS/ENTERTAINMENT Golf, Tennis, Fraternity and Alumni Parties, Class Reunions.

An Evening at the Cabaret. A Dinner Theater for members and guests of TMA Friday, May 13. Dinner in the Shamrock Hilton Emerald Room at 8 p.m. A musical at 9:30 p.m. in the hotel's new Cabaret Theater.

ADVANCE REGISTRATION FORM—FILL OUT BOTH SIDES AND MAIL TODAY

Save time and effort by registering in advance. Fill out the card at the right, mail it to TMA, and your registration packet will be waiting for you. There is no registration fee for TMA members. Registration materials may be picked up at the Shamrock Hilton Hotel, the Houston Marriott Hotel, or the Holiday Inn Medical Center.

A form for ordering tickets to the General Meeting Luncheons, the Dinner Theater, and other events is located on the back of this advance registration card. Save time by ordering your tickets now.

NAME_____

ADDRESS_____

CITY OF RESIDENCE_____

SPECIALTY_____

CONVENTION ADDRESS_____

_____

COUNTY SOCIETY_____

I shall pick up my convention materials at:

☐ Shamrock Hilton Hotel

☐ Houston Marriott Hotel

☐ Holiday Inn Medical Center

Mail to: Texas Medical Association
1801 North Lamar Blvd., Austin, Texas 78701

TO SAVE TIME AND ASSURE YOUR TICKET RESERVATION, USE ADVANCE TICKET ORDER FORM ON OTHER SIDE AND RETURN PRIOR TO APRIL 25

PLEASE CHECK THE APPROPRIATE SPACES BELOW

☐ MEMBER PHYSICIAN
☐ NON-MEMBER PHYSICIAN
☐ INTERN OR RESIDENT
☐ MEDICAL STUDENT
☐ MEMBER SPEAKER
☐ SCIENTIFIC EXHIBITOR
☐ PRESIDENT, COUNTY MEDICAL SOCIETY
☐ DELEGATE
☐ ALTERNATE DELEGATE
☐ COUNCILOR
☐ VICE COUNCILOR
☐ TMA COUNCIL CHAIRMAN
☐ GUEST REPRESENTING

_____

_____

_____

ADVANCE REGISTRATION FORM

CONTINENTAL BREAKFAST PRESENTATIONS

Reserve your tickets with card below.

Friday, May 13, 8:15-9:30 a.m.

1. HEADACHES: THEIR DIAGNOSIS AND TREATMENT
   Abe B. Baker, M.D.
   Minneapolis, Minnesota
2. THE STATUS OF T AND A, 1977
   Charles D. Bluestone, M.D.
   Pittsburgh, Pennsylvania
3. OBESITY
   George F. Cahill, Jr., M.D.
   Boston, Massachusetts
4. MANAGEMENT OF TUMORS OF THE MAJOR SALIVARY GLANDS
   Edgar L. Frazell, M.D.
   San Antonio, Texas
5. WHAT'S NEW IN ANTIBIOTIC THERAPY?
   Robert G. Petersdorf, M.D.
   Seattle, Washington
6. TRANSCUTANEOUS STIMULATION AND OTHER METHODS OF PAIN CONTROL, INCLUDING ACUPUNCTURE
   George W. Waylonis, M.D.
   Columbus, Ohio

Saturday, May 14, 8:15-9:30 a.m.

7. DIFFERENTIAL DIAGNOSIS OF PIGEON-TOEINC IN CHILDREN
   Eugene E. Bleck, M.D.
   Palo Alto, California
8. COMMON PROBLEMS IN OBSTETRICAL ANESTHESIA
   Winnie J. Crump, M.D., Houston, Texas, Moderat
   George B. Jackson, M.D., Houston, Texas
   Frank H Morriss, Jr., M.D., Houston, Texas
   Frank Moya, M.D., Miami Beach, Florida
9. SOME ASPECTS OF PULMONARY INFECTIONS
   Sydney M. Finegold, M.D., Los Angeles, Californ
   Robert G. Petersdorf, M.D., Seattle, Washington
10. CONTROVERSIES, MANAGEMENT OF COLON AN RECTAL CARCINOMA
    Donald M. Gallagher, M.D.
    San Francisco, California
11. PRINCIPLES OF RADIOIMMUNOASSAY
    Phillip L. Howard, M.D.
    Burlington, Vermont
12. BACTEREMIA IN FEBRILE CHILDREN
    Jerome O. Klein, M.D
    Boston, Massachusetts
13. MONITORING AND ADJUNCTIVE CARE OF THE CRITICALLY-INJURED OR ILL PATIENT
    G. Tom Shires, M.D.
    New York, New York

USE THESE FORMS TO REGISTER IN ADVANCE, BUY TICKETS AND MAKE HOTEL RESERVATIONS

HAVE YOUR TICKETS READY FOR YOU WHEN YOU GET TO HOUSTON

Avoid the lines, the last minute rush, and the possibility of missing out on the TMA functions listed below. Fill out the advance ticket order form, mail it to TMA with your check, and your tickets will be waiting for you.

MAIL TO: TEXAS MEDICAL ASSOCIATION
1801 NORTH LAMAR BOULEVARD, AUSTIN, TEXAS 78701

NUMBER OF TICKETS	FUNCTIONS AND PRICE (inclusive of tax and gratuity)	AMOUNT
_____	AN EVENING AT THE CABARET (DINNER THEATER)—Friday (May 13) @ $20 per person	_____
_____	GENERAL MEETING LUNCHEON—Friday (May 13) @ $8.25 per person	_____
_____	GENERAL MEETING LUNCHEON—Saturday (May 14) @ $8.25 per person	_____
_____	CONTINENTAL BREAKEAST PRESENTATIONS—Friday (May 13) @ $1.50 per person	_____
	1.___ 2.___ 3.___ 4.___ 5.___ 6.___ (see list—select one)	
_____	CONTINENTAL BREAKEAST PRESENTATIONS—Saturday (May 14) @ $1.50 per person	
	7.___ 8.___ 9.___ 10.___ 11.___ 12.___ 13.___ (see list—select one)	_____
	CHECK ENCLOSED FOR TOTAL	$_____

BE SURE TO FILL OUT THE ADVANCE REGISTRATION FORM ON THE OTHER SIDE AND RETURN PRIOR TO APRIL 25.

ADVANCE REGISTRATION FORM

GENERAL MEETING LUNCHEONS

Friday, May 13, 12:15 p.m., Shamrock Hilton Hotel. Luncheon speaker will be Edward Teller, Ph.D., LL.D., physicist, Stanford, California.

Saturday, May 14, 12:15 p.m., Shamrock Hilton Hotel. Featured speaker will be The Honorable Paul G. Rogers, Congressman, House of Representatives, Washington, D. C.

AN EVENING AT THE CABARET

Join your frinds for TMA's own special Dinner Theater Friday, May 13. Have dinner in the famous Emerald Room of the Shamrock Hilton at 8 p.m. and see a lively musical in the hotel's new Cabaret Theater at 9:30 p.m.

CONTINENTAL BREAKFAST PRESENTATIONS

Friday, May 13, and Saturday, May 14, 8:15-9:30 a.m., Shamrock Hilton Hotel and the Holiday Inn Medical Center. Attendance is limited. Have coffee and rolls with a guest speaker, then participate in an informal discussion period.

(HOUSING BUREAU USE ONLY

OFFICIAL HOUSING REQUEST

MAIL TO:

HOUSING BUREAU
1006 Main — Suite 1101
Houston, TX 77002

TEXAS MEDICAL ASSOCIATION
110th Annual Session • May 12-15,1977
Houston,Texas

(See location of facilities on back)

PARTICIPATING HOTELS AND CODES

OTEL CODE	HOTEL
H	Shamrock Hilton Hotel
cientific Sessions and Exhibits	
ngles	$ 29-43
oubles	$ 41-55
vins	$ 41-55
ites	$ 90 up 2-rm
	$140 up 3-rm
M	Houston Marriott Hotel
ouse of Delegates, Boards, Councils, ommittees	
ngles	$ 29-39
oubles	$ 39-49
wins	$ 45-49
uites	$104 2-rm
	$148 3-rm
WH	The Warwick Hotel
uxiliary Meetings	
ingles	$ 30-45
oubles	$ 45-55
wins	$ 45-55
uites	$100 up 2-rm
HMC	Holiday Inn Medical Center
cientific Sessions	
ingles	$ 24
oubles	$ 28
wins	$ 28
TMI	Tidelands Motor Inn
Singles	$ 24-28
Doubles	$ 26-31
Twins	$ 25-38
Suites	$ 55 up 2-rm
T2MI	Tides II Motor Inn
Singles	$ 26-32
Doubles	$ 29-35
Twins	$ 36-42
Suites	$ 55 up 2-rm
	$125 3-rm

FILLED

• PLEASE READ CAREFULLY •

- Please PRINT or TYPE all items to assure accuracy.
- Complete each part below in detail for correct and rapid computer processing.
- Only one room per form.
- ALL confirmations will be sent to individual indicated in Part I.

PART I

INSTRUCTIONS: Complete requested data using abbreviations as necessary.

(NAME OF PERSON REQUESTING ROOM/S)

(LAST) (FIRST NAME)

(NAME OF COMPANY OR FIRM)

(STREET ADDRESS OR P. O. BOX NUMBER)

(CITY) (STATE) (ZIP – U.S.A.)

(COUNTRY (Area Code) (PHONE NUMBER)

PART II

INSTRUCTIONS: 1. Select three hotels from the list provided on the left side of this form, then enter the appropriate code letters in the boxes below.

FIRST CHOICE	SECOND CHOICE	THIRD CHOICE
HOTEL CODE	HOTEL CODE	HOTEL CODE

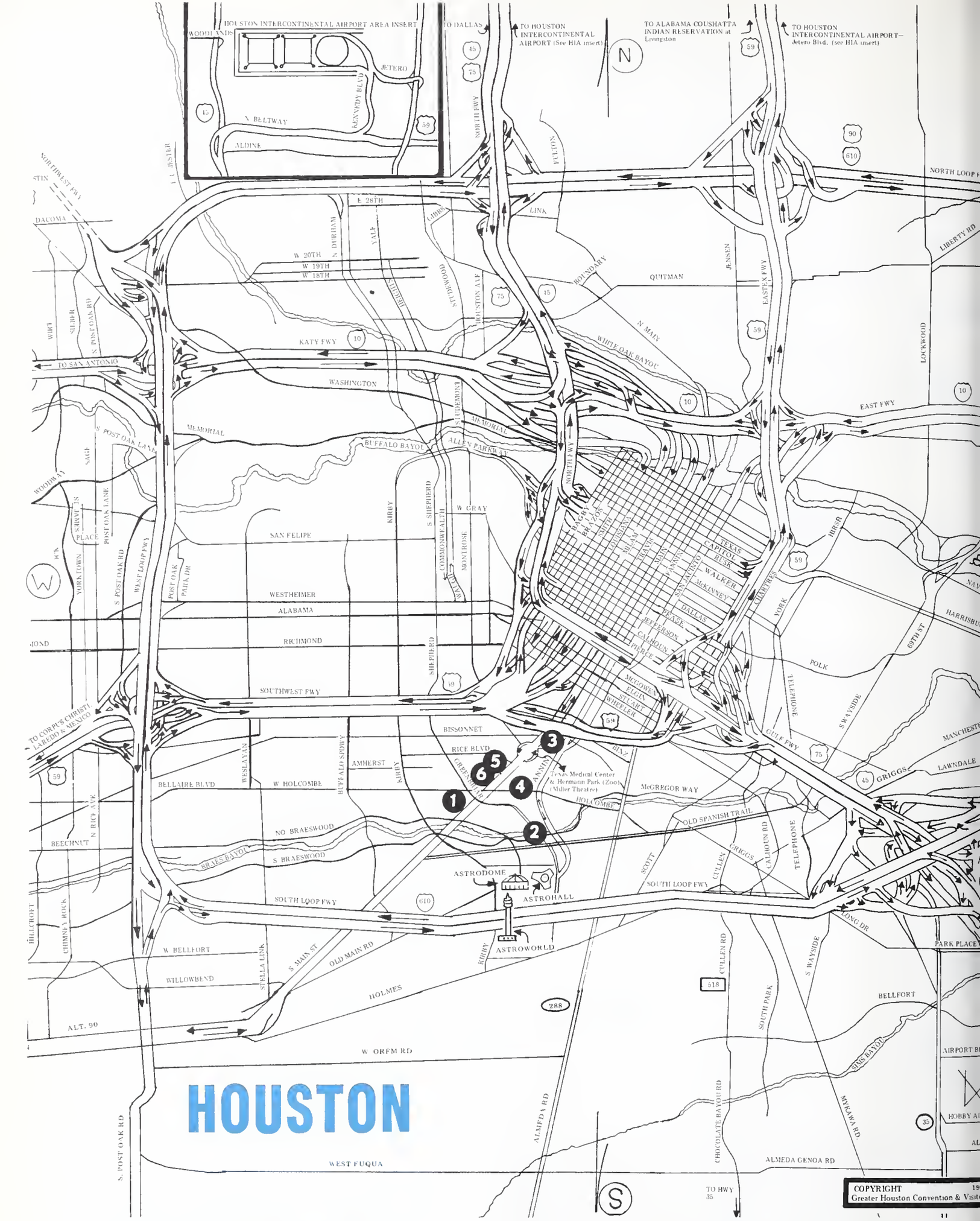
PART III

INSTRUCTIONS:
1. **Print** or **type** names of all persons occupying room.
2. Check type room desired (single, twin, etc.).
3. Indicate arrival and departure dates.

GUEST NAME/S (PRINT LAST NAME FIRST)	P+1 — Parlor & one bedroom P+2 — Parlor & two bedrooms
1.	CHECK ONE ☐ SINGLE ☐ P+1 ☐ DOUBLE ☐ TWIN ☐ P+2
2.	ARR. DATE _____ DEP. DATE _____
3.	ARRIVAL TIME _____ ☐ AM ☐ PM (Check One)
4.	**NOTE:** ROOM WILL NOT BE HELD AFTER 6 P.M. UNLESS PAYMENT IS GUARANTEED FOR FIRST NIGHT. HOTEL MAY REQUIRE DEPOSIT.

FOR USE OF ASSN. ONLY

ROOM RESERVATIONS MUST BE RECEIVED BY APRIL 25. CONFIRMATION CANNOT BE GUARANTEED ON RESERVATIONS RECEIVED AFTER THAT DATE.



HOUSTON

1. **SHAMROCK HILTON HOTEL**
   Scientific Sessions and exhibits
2. **HOUSTON MARRIOTT HOTEL**
   House of Delegates, Boards, Councils, Committees
3. **THE WARWICK HOTEL**
   Auxiliary Meetings
4. **HOLIDAY INN MEDICAL CENTER**
   Scientific Sessions
5. **TIDELANDS MOTOR INN**
6. **TIDES II MOTOR INN**

***COMPULSION/ an irresistible impulse to perform an irrational act.**

Excessive drinking . . . leading to alcohol addiction . . . can't be controlled successfully unless the **compulsion** is destroyed.

Schick Hospital is a confirmed leader in modifying compulsive behavior and replacing it with **rational thinking and behavior.**

Aversive conditioning has been found to be the fastest, most effective means of breaking up compulsive drinking. Combined with rational behavior therapy, over half of the individuals who take a two-week re-education program never take nor feel the need to take another drink.

A 100% medically oriented program in a first class hospital fully accredited by the Joint Commission on Accreditation of Hospitals, and a Blue Cross-Blue Shield Member Hospital. Health and hospitalization insurance approved, including CHAMPUS.

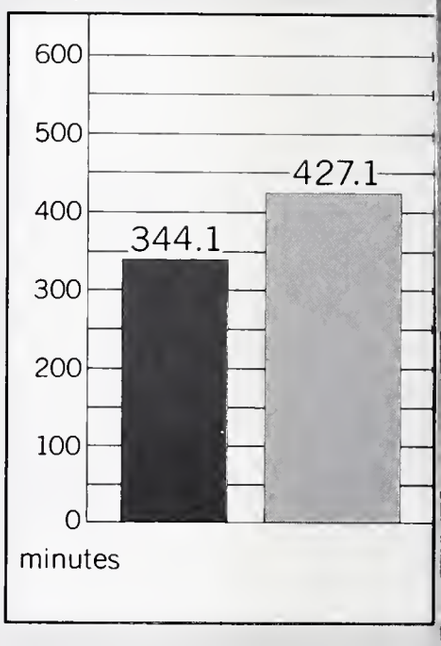
SCHICK HOSPITAL
4101 Frawley Drive · Fort Worth, (D/FW Mid-Cities) 76118
Call for 24 hour information: Fort Worth (817) 284-9217 · Dallas (214) 589-0444

COMING SOON. Hospital programs for compulsive eaters and overweight individuals.
Hospital programs for compulsive smokers with pulmonary and cardiovascular disorders.

*Webster's New Collegiate Dictionary

Proof of effectiveness in 6 elderly Texans with insomnia

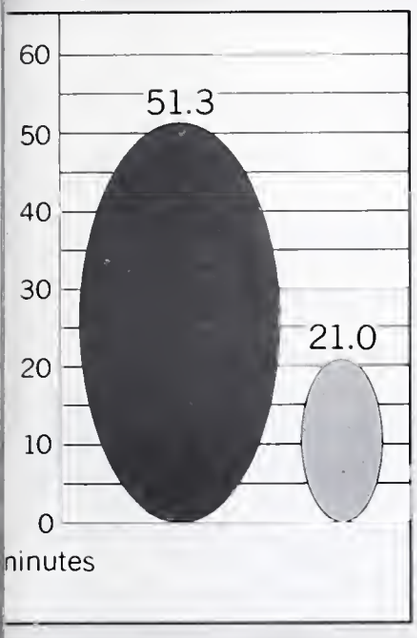
Average increase in total sleep time: 83.0 minutes



Elderly insomniac patients slept appreciably longer, fell asleep faster, spent less time awa during the night[1]

Six elderly insomniac female average age 74, received Dalman (flurazepam HCl) 15 mg for seve consecutive nights in the sleep research laboratory of a major un versity medical center in Texas. Every patient improved clinically in the two insomnia parameters shown above, and also spent less time awake after sleep onset. The greater the degree of insomnia any patient experienced before Dalmane, the greater the improve ment with Dalmane. Efficacy was undiminished over the entire medication period.

verage decrease in sleep
tency: 30.3 minutes



)almane (flurazepam HCl)
; relatively safe, even
)r patients on chronic
/arfarin therapy

Morning "hang-over" has been
latively infrequent with Dalmane.
he usual adult dosage is 30 mg *h.s.*;
)wever, in elderly and debilitated
tients, start with 15 mg to help
eclude oversedation, dizziness or
axia. Dalmane may be used in
tients on chronic warfarin therapy;
) unacceptable fluctuation in
othrombin time has been reported.[2,3]

Pretreatment

DALMANE
(flurazepam HCl)
15 mg

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:
Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.
Contraindications: Known hypersensitivity to flurazepam HCl.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

Usage in Pregnancy: **Several studies of minor tranquilizers (chlordiazepoxide, diazepam, and meprobamate) suggest increased risk of congenital malformations during the first trimester of pregnancy. Dalmane, a benzodiazepine, has not been studied adequately to determine whether it may be associated with such an increased risk. Because use of these drugs is rarely a matter of urgency, their use during this period should almost always be avoided. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.
Precautions: In elderly and debilitated, limit initial dosage to 15 mg to preclude oversedation, dizziness and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.
Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase.
Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.
Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

Referenees:
1. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
2. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
3. Robinson DS, Amidon EL: Interaction of benzodiazepines with warfarin in man, in *The Benzodiazepines*, edited by Garattini S, Mussini E, Randall LO. New York, Raven Press, 1973, p. 641

Objective proof offered by no other sleep medication

Dalmane®
(flurazepam HCl)©IV

One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.
One 30-mg capsule *h.s.* — usual adult dosage
(15 mg may suffice in some patients).

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

What Makes A Hospital Great For Doctors?

- Doctor Management?
- A Growing Metropolitan Area?
- Close Linkage With Medical — Research Facilities?
- Constant Addition Of New Ideas, Young Ideas?
- All The Above?

We Think So!

That's why Pasadena Bayshore is the ideal place to begin your practice.

You'll help us continue to build greatness. You'll begin building your practice — your career — as you help the continued building of this 379 bed (soon to be 470 bed) hospital, situated in Pasadena, Texas — just north of the Space Craft Center — a few miles east of the Houston Medical Center.

Built by physicians, Bayshore has move-in options, services, and many special facilities designed to meet the individual physician's relocation needs. Check these advantages, then check with the Pasadena Bayshore Hospital.

- Ninety acre complex — space for growth.
- Ample office space presently available in modern, professional building.
- Importantly for young doctors — you are assured of an immediate practice. Talk with us about your income assurance during that first critical year.
- Lots available — room for your own office buildings.
- Doctor Management — doctors' needs are paramount.
- Highly-trained staff — superior general services.
- Specialized services and facilities — including nuclear medicine, obstetrics, cardiology (and psychiatry located in our separate Psychiatric Annex).
- For your convenience - answering service, full line of doctors' office supplies, and more.

For information call (713) 944-6666 EXT 221
Charles M. Cooper, Jr., Administrator

PASADENA BAYSHORE HOSPITAL

4000 Spencer Highway **Pasadena, Texas 77504**

Starlite Village Hospital

Center Point, Texas

Ph.: 634-2212
634-2213

- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

CHAMPUS APPROVED
JCAH: ACCREDITED.

Wichita Falls Clinic

501 Midwestern Parkway East, Wichita Falls, Texas 76302

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Clark W. Brazil, M.D.

GENERAL THORACIC AND VASCULAR SURGERY
Cecil H. Meares, M.D.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
David G. Borman, M.D., F.A.C.S.
Richard H. Moore, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOLOGY AND RADIOACTIVE ISOTOPES
Thomas K. Bose, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
Joseph Bilder, Jr., M.D.
George W. Slaughter, M.D.

INTERNAL MEDICINE
P. K. Smith, M.D., F.A.C.P.
I. L. Humphrey, Jr., M.D.
Preston McCall, M.D.
Julian C. Sleeper, M.D., Cardiology
David M. Pogue, M.D., Cardiology
Wendell I. Wyatt, M.D.
Lowell L. Harvey, M.D.

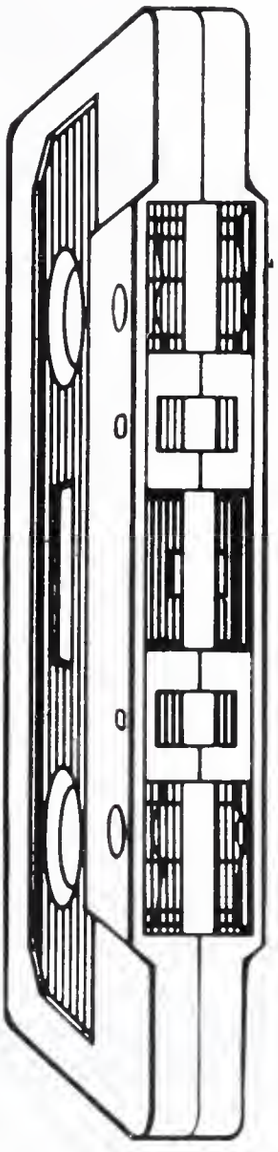
FAMILY PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
James T. Cook, M.D.
Madeleine Kent, M.D.

UROLOGY
John C. Wurster, M.D.

OBSTETRICS AND GYNECOLOGY
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
James M. Missler, Administrator

Straight Talk from TMA



on issues affecting you

On one cassette hear lawmakers and medical experts probe:

- malpractice insurance
- drug legislation
- national health insurance
- Medical Practice Act changes
- Medical care costs
- Medicaid/Medicare
- Other vital issues

Experts at the 1977 Update on Legislative Issues conference included: Texas Secretary of State Mark White; AMA Past President Max Parrott, M.D.; Frank Jirka, M.D., of the AMA Board of Trustees; 4 key legislators and 11 other authorities.

ONE CASSETTE HAS EXCERPTS OF IT ALL

Order Today

To: Dept. of Communication
Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

Please send_____1977 Update on Legislative Issues tapes at $5.00 each.
(No.)

My check for $_____is enclosed, payable to Texas Medical Association.

Send to: _____
(print or type) (Name)

_____
(Address)

_____
(City, state, zip)

OPEN WIDE AND SAY . . .

AAAHHHHHHHH!

We've got more cars than you can shake a thermometer at. Any model, any make — American or foreign. You just choose the car you want. Load it up with all the extras. Then we'll make the leasing arrangements. All you have to do is get in and drive it away.

Why else should you lease from us?

- Low lease cost
- Tax write-offs
- Positive cash flow
- No record keeping necessary
- Custom-tailored leases
- Total maintenance of Lincoln-Mercury products.

Texas Medical Association Automobile Lease Program

Underwritten by:

Bankston Rentals, Inc. • 4747 LBJ Freeway • Dallas, Texas 75234 •214/233-1441

Southwest Motor Leasing, Inc. • 6737 Southwest Freeway • Houston, Texas 77074 • 713/777-3816

Texas Physicians' Directory

Clinics

THE FORT WORTH CLINIC
1221 West Lancaster Avenue, Fort Worth, Texas 76102
Telephone 817 336-7191

INTERNAL MEDICINE
Kendra J. Belfi, M.D.
John M. Church, M.D.
Thomas J. Coleman, M.D.
Robert R. Dickey, M.D.
Ferd E. Garrison, Jr., M.D.
Cortell K. Holsapple, M.D.
John E. Johnson, Jr., M.D.
O. M. (Jack) Phillips, M.D.

GENERAL SURGERY
John H. Sewell, M.D.
Robert L. Sewell, M.D.

ORTHOPEDIC SURGERY
Thomas E. Rapp, M.D.

CONSULTANTS IN RADIOLOGY
Victor E. McCall, M.D.
Dixon Presnall, M.D.
Harry H. Whipp, M.D.

FIFTH AVENUE CLINIC
650 Fifth Avenue, Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etler, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

THOMAS-SPANN CLINIC
1533 South Brownlee, Corpus Christi, Texas 78404
Telephone 883-7411

FAMILY MEDICINE
Travis B. Phelps, M.D., F.A.A.F.P.
T. D. Harvey, M.D., A.B.F.P.
H. R. Rose, M.D., A.B.F.P.
C. L. Vernor, M.D.
Frederick S. Maurer, M.D.

ORTHOPEDICS
C. M. Yanez, M.D., F.A.C.S.

INTERNAL MEDICINE
G. A. Reeves, M.D.
Pruett Moore, Jr., M.D.
Mark G. Strauss, M.D.

ADMINISTRATOR
Gene Hybner

DIRECTOR OF NURSES
Pat Parker, R.N.

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

Internal Medicine
C. M. Maruri, M.D.
A. J. Nodarse, M.D.

General Surgery
B. W. Hink, M.D., F.A.C.S.

Family Medicine
J. H. Cochrane, Jr., M.D., F.A.A.F.P.
J. W. O'Bryant, M.D.
A. A. Piske, M.D.

Family Medicine and General Surgery
Salvador Faus, M.D.

Clinic Manager
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

Remind your colleagues of your specialty and office location.
Purchase a listing in the "Texas Physicians' Directory."

MALONE AND HOGAN CLINIC
1501 West 11th Place, Big Spring, Texas 79720, Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.
W. B. Allensworth, M.D.

GENERAL SURGERY
C. B. Marcum, M.D., F.A.C.S.
J. E. Mathews, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
C. T. Moore, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
D. M. Logan, M.D.
V. T. Smith, M.D.

FAMILY PRACTICE
W. R. Strahan, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.
J. W. Kuykendall, M.D.

PEDIATRICS
J. M. Woodall, M.D.
B. R. Owen, M.D., F.A.A.P.

RADIOLOGY & NUCLEAR MEDICINE
Buerk Williams, M.D.

UROLOGY
G. F. Dillon, M.D.,D.A.B.U.
J. W. Cowan, M.D.

DERMATOLOGY
H. K. Butler, M.D.

PODIATRY
Bradford Glass, D.P.M.

CONSULTANT IN ELECTROENCEPHALOGRAPHY
M. L. Proler, M.D.

ADMINISTRATION
R. L. Heith, Administrator
Charles N. Butts, Fiscal Officer
H. L. Mott, Office Manager
Danny Nichols, Comptroller

RUGELEY AND BLASINGAME CLINIC
2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Richard R. Raphael

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.

DERMATOLOGY
T. S. Arrington, M.D.

DBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

ANESTHESIOLOGY
C. G. Spears, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kleier, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

CLINIC OF THE SOUTHWEST ASSOCIATES
6437 High Star at Hillcroft, Houston, Texas 77036
Telephone 774-7671

INTERNAL MEDICINE
William C. Franklin, M.D.
Arthur B. Conde, M.D., F.A.C.A.

OBSTETRICS & GYNECOLOGY
Joy L. Deere, M.D.
Loren B. Goss, M.D.

PEDIATRICS
John R. Dunn, Jr., M.D.
Blanca S. Azios, M.D.

PHYSICAL THERAPY
Richard D. Tinsley, R.P.T.

GENERAL SURGERY
Harvey B. Koch, M.D.

UROLOGY
Glen E. Lewis, M.D.

DENTISTRY
Burley G. Ingram, D.D.S.

RADIOLOGY
Richard E. Schuette, M.D.
Fred C. Hodges, M.D.

BUSINESS MANAGER
G. G. Fonville, M.H.A.

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77030
Telephone 713 797-9191

Internal Medicine and Diagnosis

ALLERGY
Arthur T. Pedersen, M.D.

CARDIOVASCULAR DISEASE
Thomas J. Fatherree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.
Bogusław Godlewski, M.D.
Matthew T. Monroe, M.D.

DERMATOLOGY
Samuel F. Bean, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Raymond L. Gregory, M.D.
R. Frederick Gregory, M.D.
Thomas J. Hanson, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.
Michael Gagliardi, M.D.
James K. Gordon, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George T. Conklin, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
George Burnazian, M.D.
Benjamin L. Portnoy, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.
James V. Ryan, M.D.

NEPHROLOGY
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

NEUROLOGY
Donald J. Russell, M.D.
George Isaacs, M.D.
Ernesto Infante, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.
Harry R. Price, M.D.
Edward L. Middleman, M.D.
Martin J. Hrgovic, M.D.

PATHOLOGY
Paul B. Radelat, M.D.
Ashok M. Balsaver, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.
Martin L. Kaplan, M.D.
Louis C. Waddell, Jr., M.D.

RADIOLOGY
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.
Joe B. Wilson, M.D.
Howard J. Pollock, M.D.

NUCLEAR MEDICINE
Donald A. Podoloff, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
Robert B. Hall,
Administrator
Richard V. Vanderslice,
Assistant Administrator

HOUSTON HEADACHE CLINIC
Park Plaza Professional Building
1213 Hermann Drive, Suite 855
Houston, Texas 77004
(713) 528-1916

Neurology
Ninan T. Mathew, M.D., F.R.C.P.(C)

Allergy

PETER B. KAMIN, M.D., P.A.
Certified American Boards of Pediatrics and Allergy
Diplomate American Board of Allergy and Immunology
Allergy and Immunology

Suite 601, Oak Hills Medical Building
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Phone 512 696-4405 or 227-6331

HOUSTON ALLERGY CLINIC
Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Richard H. Jackson, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Warren J. Raymer, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
D. W. Waddell, M.D., F.A.A.C.I.A.
Ramon Garrido, M.D., F.A.C.A., F.A.A.C.I.A.*
(Certified American Board of Pediatrics)
*Diplomate American Board of Allergy & Immunology

Suite 444, Hermann Professional Building
6410 Fannin St., Houston, Texas 77030, 713 - 797-0900

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

JOHN P. McGOVERN, M.D.
Director-Consultant

THEODORE J. HAYWOOD, M.D.
ORVILLE C. THOMAS, M.D.
JOSEPH T. QUENG, M.D.
LAWRENCE G. THORNE, M.D.
K. VENUGOPALAN, M.D.
ROBERT E. SMITH, M.D.
JAMES A. AYERS, M.D.
EUNICE W. CHOU, M.D.
ALBERT LEHMANN, M.D.
GERALD T. MACHINSKI, M.D.

Research Associates
MICHAEL H. SMOLENSKY, Ph.D.
ALAIN REINBERG, M.D., Ph.D.
CALVIN J. McLERRAN, Ph.D.
MICHAEL A. McCORMICK, Ph.D.
GLENNA M. KYLE, M.S.
ITING MAY LU, M.S.

Consultants

EVAN M. HERSH, M.D.
JUDITH H. MARSTON, Ph.D.
Immunology

JAMES A. KNIGHT, M.D.
Psychiatry

HERBERT C. McKEE, Ph.D.
RICHARD K. SEVERS, Ph.D.
Air Pollution

CAROLYN S. LEACH, Ph.D.
Clinical Laboratories

JOHN A. THOMAS, Ph.D.
Clinical Pharmacology

THOMAS D. DOWNS, Ph.D.
Biometrics

WARREN E. SCHALLER, H.S.D.
Allied Health Sciences

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025, (713) 661-1444

CORPUS CHRISTI ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology

2530 Morgan, Corpus Christi, Texas, 882-3487

STUART ALAN MASON, M.D., P.A.
Fellow American Association for Clinical Immunology and Allergy
Fellow of the American College of Allergists
Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

ALLERGY AND IMMUNOLOGY
Joseph T. Sams, M.D., P.A. or C. David Meadows, M.D., P.A.
Diplomates of the American Board of Allergy and Immunology

900 W. Randol Mill Rd., Suite 215, Arlington, Texas 76012, 817 277-1161

CHARLES A. RUSH, JR., M.D.
Diplomate/American Board of Allergy & Immunology

Northeast Medical Clinic Association
7601 Glenview Drive
Fort Worth, Texas 76118

V. E. FRIEDEWALD, M.D., F.A.C.P.
Diplomate American Board of Allergy and Immunology
Allergy

2203 West Tennessee, Midland, Texas 79701, 682-5385

Anesthesiology

HOUSTON PAIN CLINIC
ALEX M. STRAJA, M.D., F.R.C.P.(C), F.A.C.A.
Practice Limited to Treatment of Chronic Pain Syndromes and Nerve Blocks
Practice by Referral Only
Medical Towers, 6608 Fannin, Suite 1417
Houston, Texas 77030 Phone: 713 797-1681

TMA Group Insurance Plans
. . . Another service of your association

TMA Members' Retirement Trust (Keogh)
. . . Another service of your association

Colon & Rectal Surgery

ALVIN BALDWIN, JR., M.D.
Diplomate American Board of Colon and Rectal Surgery

R. D. DIGNAN, M.D.
Diplomate American Board of Surgery
Diplomate American Board of Colon and Rectal Surgery

Suite 1209 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246
Telephone 824-2573

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery

2715 Fannin Street, Houston, Texas

C.D.L. CROMAR, M.D., M.S., F.R.C.S.E., F.R.C.S.C.
Surgery of the Rectum and Colon

Suite 8, 3337 Plainview, Pasadena, Texas 77504

SOMMAI SEHAPAYAK, M.D.
Diplomate American Board of Colon and Rectal Surgery
Diseases and Surgery of the Colon and Rectum and Fiber-optic Colonoscopy

Medical Tower, Suite 210, 1550 West Rosedale,
Fort Worth, Texas 76104, 817-338-4501 (24 hours)

SUVID PITA, M.D.
Colon and Rectal Surgery
Colonoscopy

Barnett Tower, Baylor Medical Plaza
3600 Gaston Ave, Suite 411
Dallas, Texas 75246
Telephone 214 821-4300

MANUEL G. LAGON, M.D., F.A.C.S.
Diplomate American Board of Colon and Rectal Surgery

FORT WORTH COLON AND RECTAL CLINIC, P.A.
Colonoscopy, Colon and Rectal Surgery

909 Eighth Avenue, Fort Worth, Texas 76104; Telephone 332-1371

MEMORIAL LIBRARY
TEXAS MEDICAL ASSOCIATION

1801 North Lamar Blvd., Austin, Texas 78701, 512 477-6704

A clinical library designed to assist the practicing physician

50,000 bound volumes ● extensive reprint and periodical collection ● 400 lay and professional films ● pathological slide sets ● cassette and reel-to-reel tapes from AMA, Audio Digest ● MEDLINE computer data service

. . . Another service of your association

Dermatology

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy

1400 Eighth Street, Wichita Falls, Texas

DRS. PIPKIN AND RESSMANN
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies

714 Medical Arts Bldg., San Antonio, Texas 78205

J. GILMORE BRAU, M.D.
Dermatology and Syphilology
X-Ray and Radium Therapy
Hours 9 to 1—3 to 5
3817 Brown Street, Dallas, Texas

JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
A Professional Association
Dermatology, Syphilology, and Cancer of the Skin

3801 19th St., Suite 500, Lubbock, Texas 79410

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies

7777 Forest Lane, Suite 214, Dallas, Texas 75230; Phone 661-7460

GERALD A. CASID, M.D., P.A.
Skin Diseases—Skin Tumors
Hair Transplantation, Dermabrasion, Chemical Peels

333 N. Shiloh Rd., Garland, Texas 75042
Phone 214-272-5451

DAVID S. ALKEK, M.D. AND ASSOCIATES
Dermatology and Cancer of the Skin
Dermabrasion and Chemical Peel

8226 Douglas Avenue, Suite 755
Dallas, Texas 75225
Ph: 214-691-6691

Endocrinology

ENDOCRINE ASSOCIATES OF DALLAS, P.A.
STANLEY FELD, M.D.
RICHARD SACHSON, M.D.
Practice Limited to Endocrinology

Douglas Plaza Bldg., Telephone: 363-5535
8226 Douglas Avenue, Dallas, Texas 75225

TMA Physicians' Placement Service

. . . Another service of your association

Eye, Ear, Nose, Throat

DRS. NALLE, ELLSASSER AND CLAYTON
Eye and Allergy of the Ear, Nose and Throat

Ernest Nalle, Jr., M.D., DAB Oto., F.A.C.S., F.I.C.S.
M. G. Ellsasser, M.D., DAB Oph.
Miles G. Clayton, M.D., Oph.

1312 Main Street, Lubbock, Texas 79401, 806 762-8771

Family & General Practice

GLENN C. COATES, M.D.*
GENE V. HAVERLAH, M.D.
SAM A. NIXON, M.D.*
EUGENE M. TOKAR, D.D.S.

1303 Hospital Blvd., Floresville, Texas 78114, 512 393-2527
*Diplomate American Board of Family Practice

SAMUEL SILVA, M.D.
Hair Transplantation

4759 South Freeway, Fort Worth, Texas 817 923-7374

Gastroenterology

CECIL O. PATTERSON, M.D., F.A.C.P.
DAVID E. LANGDON, M.D., F.A.C.P.
Gastroenterology, Gastroscopy, Esophagoscopy, and Colonoscopy
1414 Medical Arts Building, Dallas, Texas, 742-6141-44

MILFORD O. ROUSE, M.D., F.A.C.P.
Consultations in hospitals only

DRS. BAILEY, DOUGLAS AND DEVANEY ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System

Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
George T. DeVaney, M.D.

KALMAN NARAYAN, M.D.
Diplomate American Board of Internal Medicine
Gastroenterology, Gastroscopy, Colonoscopy, Polypectomy, E.R.C.P.

909 8th Ave., Suite 7, Ft. Worth, Texas 76104, 817 336-9055

General Surgery

BURT B. SMITH, M.D., F.A.C.S.
Surgery
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery

728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

TMA Physicians Benevolent Fund

. . . Another service of your association

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery

1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Thoracic Surgery
Vascular, General and Thoracic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue,
Dallas, Texas 75246, 821-2356

ROBERT J. TURNER, III, M.D., F.A.C.S.
Diplomate American Board of Surgery
General and Peripheral Vascular Surgery

The Saint Joseph Professional Building
1400 South Main Street, Suite 104
Fort Worth, Texas 76104, 335-8311

ROBERT M. STECKLER, M.D.
Diplomate American Board of Surgery
Head and Neck Surgery, Surgery, and Surgical Oncology

Baylor Medical Plaza, Suite 1008, 3600 Gaston Avenue,
Dallas, Texas 75246, 214 827-9880

ROBERT DAVIS, M.D., M.B., B.Ch. (Rand), F.R.C.S. (Edin.)
General Surgery

430 Park Plaza Professional Building, 1213 Hermann Drive,
Houston, Texas 77004; 713 528-0597

By Appointment

Hand Surgery

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopaedic Surgery
PETER R. CARTER, M.D.
Hand Surgery and Upper Extremity Reconstructive Surgery

Baylor Medical Plaza, Barnett Tower, Suite 802, 3600 Gaston Avenue
Dallas, Texas 75246, 214 823-5351

Neurological Surgery

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery

Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Morris Sanders, M.D.
Phillip E. Williams, Jr., M.D.
Ira C. Denton, Jr., M.D.
W. Robert Hudgins, M.D.
Jack Woolf, M.D., Consultant

5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620,
Dallas, Texas 75235; 214 637-0420

8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905,
Dallas, Texas 75231; 214 369-7596

3600 Gaston Avenue, Barnett Tower, Baylor Medical Plaza, Suite 310,
Dallas, Texas 75246; 214 826-1976

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
Neurological Surgery

8210 Walnut Hill Lane, Suite 805, Dallas, Texas 75231, 363-8524

RONALD SMITH, M.D.
Neurological Surgery

901 South Lake, Fort Worth, Texas, 336-0551

CHERRY-LONG NEUROSURGERY ASSOCIATION
GLENN R. CHERRY, M.D., D.A.B.N.S., F.A.C.S.
R. GORDON LONG, M.D., D.A.B.N.S., F.A.C.S.
BENNIE B. SCOTT, M.D.
Neurological Surgery
Baylor Medical Plaza — 605 Barnett Tower
3600 Gaston Avenue — Dallas, Texas 75246
Telephone 214 826-7060

EL PASO NEUROLOGICAL INSTITUTE
Professional Association

Neurology, Neurosurgery, Electroencephalography
Neuro-Radiology, Physiotherapy

William J. Nelson, M.D., Neurosurgery
John T. O'Neal, M.D., Neurosurgery
Robert D. Schneider, M.D., Neurology and Electroencephalography
Steven K. Crouse, M.D., Neurology and Electroencephalography

Medical Plaza Bldg., Suite 307
El Paso Medical Center
1501 Arizona Avenue, El Paso, Texas 79902
Telephone 915 532-8901

TEXAS NEUROLOGICAL INSTITUTE AT DALLAS, P.A.

Neurological Surgery
James E. Bland, M.D.
Martin L. Lazar, M.D.

Medical Neurology, Electroencephalography and Electromyography
Ralph G. Greenlee, Jr., M.D.
Allan L. Naarden, M.D.
Richard R. North, M.D.
William S. Woodfin, M.D.

Neuro-Ophthalmology and Electrodiagnosis of the Eye
Peter R. Bringewald, M.D.

7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676
8210 Walnut Hill Lane, Suite 900, Dallas, Texas 75231; 214 361-8100

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D., F.A.C.S.
E. FLOYD ROBINSON, M.D.

Neurological Surgery

2210 Maroneal, Houston, Texas 77025, 523-3684

FORT WORTH NEUROSURGICAL CLINIC
William R. Bernell, M.D.
George B. Crisp, Jr., M.D.
Charles L. Webster, Jr., M.D.

662 South Henderson, Fort Worth, Texas 76104
Telephone 338-9333; WATS Line 1-800-792-2278

"Every man owes some of his time to the upbuilding of his profession"

—Theodore Roosevelt

Take an active role in TMA and your county society.

Nuclear Medicine

NUCLEAR MEDICINE LABORATORIES OF TEXAS
Texas Medical Center
6411 South Main Street, Houston, Texas 77025

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology and Obstetrics-Gynecology

Herbert C. Allen, Jr., M.D., Director, 526-1501

HERBERT C. ALLEN, JR., M.D.
Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77025, 526-1501

Ophthalmology

HOUSTON EYE ASSOCIATES
1100 Hermann Prof. Bldg., Houston, Texas 77030, 713 790-1100

Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D., F.A.C.S.
Malcolm L. Mazow, M.D., F.A.C.S.
Robert H. Stewart, M.D., F.A.C.S.
Robert B. Wilkins, M.D., F.A.C.S.
Jeffrey D. Lanier, M.D., F.A.C.S
Michael A. Bloome, M.D., F.A.C.S.
Paul C. Salmonsen, M.D.
Richard L. Kimbrough, M.D.

DRS. ALPAR, TAYLOR, HOWELL, CURRIE & WEINBERGER
Ophthalmology

John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Hugh B. Currie, M.D.
Bruce L. Weinberger, M.D.
Diplomates of the American Board of Ophthalmology
15 Medical Drive, Amarillo, Texas

TEXAS RETINA ASSOCIATES
Albert Vaiser, M.D.
William B. Snyder, M.D.
William L. Hutton, M.D.

Diseases and Surgery of the Retina and Vitreous

318 Medical Arts Building, Dallas, Texas, 748-0958

BRUCE C. TAYLOR, M.D.
RICHARD L. WINSLOW, M.D.
Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E., Dallas, Texas 75204
214 521-1153

McPHERSON ASSOCIATES
Diseases and Surgery of the Retina and Vitreous
Alice R. McPherson, M.D.
Robert A. Moura, M.D.
Arthur W. Willis, M.D.
Durham Barnes, M.D.

6436 Fannin, Suite 800, Houston, Texas 77030
713 797-1903

EYE ASSOCIATES
Diseases and Surgery of the Eye
Charles A. Sargent, M.D.
Alan C. Baum, M.D.

3838 Hillcroft, #415, Houston, Texas 77027, 713 781-2882

CORPUS CHRISTI EYE ASSOCIATES

J. Gordon Bryson, M.D.
C. A. Struve, M.D.
John W. Lewis, M.D.

3166 Reid Drive, Corpus Christi, Texas 78404, Phone 853-7319

EYE CENTER OF AUSTIN

3913 Medical Parkway
Austin, Texas 78756; 512 451-8484

Edward J. Petrus, M.D.
Richard E. Nieman, M.D.

JOHN Y. HARPER, JR., M.D., P.A.

Diseases & Surgery of the Vitreous and Retina

601 Madison Square Medical Building
311 Camden Street, San Antonio, Texas 78212
(512) 226-1812

PETER R. BRINGEWALD, M.D.

Neuro-Ophthalmology

Texas Neurological Institute at Dallas, P.A.
7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214-661-7676

By appointment only.

Orthopedic Surgery

H. H. Beckering, M.D.
L. Ray Lawson, M.D.
George Truett James, M.D.
Robert D. Vandermeer, M.D.
Wynne M. Snoots, M.D.
R. Stephen Curtis, M.D.

W. B. CARRELL MEMORIAL CLINIC

A Professional Association
2828 Lemmon Ave., Dallas, Texas

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas

Louis J. Levy, M.D.
Henry C. McDonald, Jr., M.D.
Fred W. Sanders, M.D.
James M. Beckley, M.D.
Joseph H. Gaines, M.D.

Ralph E. Donnell, M.D.
F. Carlton Hodges, M.D.
J. Price Brock, Jr., M.D.

ORTHOPEDIC ASSOCIATES

Diplomates American Board of Orthopedic Surgery

1133 N. 19th St., Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC

Joseph Barnhart, M.D.
Donald T. Lazarz, M.D.
Lee C. Detenbeck, M.D.
Thomas S. Padgett, M.D.

5620 Greenbriar, Houston, Texas 77005, 526-6262 and
Parkway Towers Professional Building, 150 West Parker Road,
Houston, Texas 77022, 691-3905

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr., M.D.
Kenneth C. Scholz, M.D.
W. Ted Sisco, M.D.
G. S. Gill, M.D.

3702 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

ADDRESS CHANGE? Avoid missing or delayed mail. Send old and new address to Membership Department, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701.

THE ORTHOPEDIC GROUP OF RICHARDSON

Charles E. Graham, M.D.
M. Gayle Gildewell, M.D.

812 S. Central Expressway, Richardson, Texas 75080, 231-6396

Orthopedic Surgery

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr., M.D.
E. E. Rising, Jr., M.D.*
C. Poindexter, M.D.
C. R. Vavrin, M.D.
Diplomates American Board of Orthopaedic Surgery
*Emphasizing Surgery of the Hand
Frank R. Vincenti, M.D.

801 West Randol Mill Road, Arlington, Texas 76012, 817 261-8284

BOSWELL-EVANS ORTHOPAEDIC CLINIC

4849 West Lawther Drive
Dallas, Texas 75214

George M. Boswell, Jr., M.D., F.A.C.S.
Practice Limited to Consultation and Surgery

James P. Evans, M.D.
Practice Limited to Sports Medicine

LOUIS W. BRECK, M.D., P.A., F.A.C.S.

Diplomate American Board of Orthopaedic Surgery
Practice Limited to Orthopaedic Surgery

1300 N. Stanton Street, El Paso 79902
Telephone 915 544-3831

THURSTON DEAN, M.D.

Diplomate American Board of Orthopedic Surgery

509 N. Garfield Street
Midland, Texas 79701
Telephone: 915 682-0433 or 682-0163

Otolaryngology

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.

Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

Otology

DANIEL McNAMARA MARTINEZ, M.D., F.A.C.S.

Otology and Otoneurology

8210 Walnut Hill Lane, Presbyterian Professional Building,
Suite 400, Dallas, Texas 75231; 214 691-7331

DALLAS HEARING, BALANCE AND OCULAR PULSE LABORATORY

Audiology—Vestibulometry—Non-invasive Carotid and Vertebral Circulation Studies

402 Presbyterian Professional Building, 8210 Walnut Hill Lane,
Dallas, Texas 75231; 214 691-7367

Make your plans now to attend the

110TH TMA ANNUAL SESSION

MAY 11-15, 1977 Houston

Pathology

FORT WORTH MEDICAL LABORATORIES
John J. Andujar, M.D.
Dorothy Patras, M.D.

1400 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

BROWN & ASSOCIATES MEDICAL LABORATORIES
Clinical Pathology, Hematology, Surgical Pathology, Exfoliative Cytology and Electrophoresis

Wilson G. Brown, M.D.
George V. Miller, M.D.
Walter G. Olin, Jr., M.D.
John R. Thomas, M.D.
S. Joseph Skinner, M.D.
Joe B. Haden, M.D.
Enrique van Santen, M.D.
Elaine V. Shalek, M.D.
Robert H. McNeely, M.D.
Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas 77030
220 Park Plaza Prof. Bldg., Houston, Texas 77004
Telephone 527-5230
Mailing Containers on Request — Office Pickup Service in Houston

PRUITT MEDICAL LABORATORIES
Jack Pruitt, M.D.
E. Hernandez, M.D.
Diplomates, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation
P. O. Box 160, Lufkin, Texas 75901, 634-4451

WACO CLINICAL PATHOLOGY LABORATORY
K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Robert Wayne Walter, M.D., F.A.C.P.
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation
Mailing Containers on Request
2112 Washington Ave., P.O. Box 3160, Waco, Texas 76707, 756-7226

J. S. Wilkenfeld, M.D., Medical Laboratories, Inc.
J. S. WILKENFELD, M.D. ENA E. MOCEGA, M.D.
Diplomates of the American Board of Pathology
Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology
8850 Long Point Road, P.O. Box 55008
Houston, Texas 77055, 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

ARTHUR L. RAINES, M.D. AND ASSOCIATES
Pathologists
DIPLOMATES, AMERICAN BOARD OF PATHOLOGY
Clinical Pathology — Surgical Pathology
Exfoliative Cytology — Medicolegal Consultation
Hospital and Clinic Laboratory Consultation
P. O. Box 118, Cleburne, Texas 76031
817 645-9181, Ext. 360
MAILING CONTAINERS ON REQUEST

HENRY B. OWENS, M.D., F.C.A.P.
Diplomate American Board of Pathology
Cytology and Tissue Pathology Only

801 E. Border St., Suite M, P. O. Box 1627
Arlington, Texas 76010, (817) 461-2771

Mailing Containers on Request—Office Pickup Service in Arlington

Physical Medicine & Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES WARM SPRINGS FOUNDATION, INC.
P. O. BOX 58, GONZALES, TEXAS 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade
WILLIAM E. HISEY, Administrator
LARRY E. BROWNE, M.D., Medical Director

ROBERTO G. ROLFINI, M.D.
Diplomate American Board of Physical Medicine & Rehabilitation
Rehabilitation Medicine and Electromyography

702 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205, Telephone 226-2424

WILLIAM T. BLESSUM, M.D.
Physical Medicine, Rehabilitation, & Electromyography

7342 Oak Manor, Suite 125

San Antonio, Texas 78229; Telephone (512) 349-6573

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D., F.A.C.S.
THOMAS M. BIGGS, M.D., F.A.C.S.
LAURENCE E. WOLF, M.D.
Diplomates American Board of Plastic Surgery

PLASTIC SURGERY
5419 Caroline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery

530 Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Cosmetic Surgery

612 Doctors Bldg., Fort Worth, Texas 336-0356

PLASTIC SURGERY ASSOCIATES
Simon Fredricks, M.D., F.A.C.S.
Charles W. Bailey, Jr., M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery

Jonathan J. Dora, M.D.

1103 Medical Towers, Houston, Texas 77025, 523-5575

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
Plastic & Reconstructive Surgery
Cosmetic Surgery

606 Medical Plaza Bldg., 800 Eighth Avenue, Fort Worth, Texas 76104, 335-4751

VALENTIN GRACIA, M.D., P.A., F.A.C.S., F.I.C.S., D.A.B.
Aesthetic Surgery—Burns

1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

FRANCIS A. MORRIS, JR., M.D.
Diplomate American Board of Plastic Surgery
Plastic Surgery

3100 Red River, Austin, Texas 78705; 512-476-9149

TMA International Travel Program
. . . Another service of your association

PATRICK H. BECKHAM, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1111 West 34th Street, Suite 207, Austin, Texas 78705, 459-3258

WILLIAM E. BARNES, M.D.
Diplomate American Board of Plastic Surgery
Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 608, Austin, Texas, 454-7659

JOHN E. CARTER, M.D., P.A.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery

7711 Louis Pasteur Drive, San Antonio, Texas 78229
Telephone: (Area Code 512) Office 696-2390 Medical Exchange 227-6331

JOSEPH C. FORD, M.D., P.A., F.A.C.S.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery

508 Madison Square Medical Building
311 Camden, San Antonio, Texas 78215, 224-5509

BROMLEY S. FREEMAN, M.D., F.A.C.S.
D. ROBERT WIEMER, M.D.
Diplomates American Board of Plastic Surgery
Plastic & Reconstructive Surgery

7000 Fannin, Suite 1770, Houston, Texas 77025
713 795-5584

JACK L. CONLEE, M.D.
Diplomate American Board of Plastic Surgery
Plastic and Cosmetic Surgery

3318 S. Alameda, Suite 1, Corpus Christi, Texas, 855-7359

PLASTIC SURGERY ASSOCIATION
LEONARD KOCH, M.D.
Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410, 806 792-2313

ROBERT L. CLEMENT, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive Surgery

1111 West 34th Street, Suite 205, Austin, Texas 78705, 512 459-3101

STEPHEN C. LESAUVAGE, M.D.
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1318 Clinic Drive, Tyler, Texas 75701; 214 593-8296

Legislative Hot Line — Call 1-800-252-9231
for a recorded message from TMA on current legislative issues

. . . Another service of your association

Psychiatry

Perry C. Talkington, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Larry R. Kimsey, M.D.
Charles M. Smith, M.D.
Gregory G. Dimijian, M.D.
Linda R. Hughes, M.D.
Roy H. Fanoni, M.D.
Byron Howard, M.D.
Larrie W. Arnold, M.D.
Madeline W. Harford, M.D.
John G. Looney, M.D.

practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

FABRE CLINIC

LOUIS F. FABRE, JR., M.D., Ph.D.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy
Children — Family — Alcoholism

Free of charge to patient MEDICATION CLINIC FOR PATIENTS WITH ANXIETY OR DEPRESSION IN CONJUNCTION WITH CNS RESEARCH WITH PSYCHOPHARMACOLOGICAL COMPOUNDS

DAVID McLENDON, Ph.D.
Licensed Clinical Psychologist
Individual and Group Psychotherapy
Diagnostic Evaluations and Counseling

H. JOHN JACKSON, Ed.D.
Educational Psychologist
Administrative Consultation to School Districts
Program Organization Consultation
Individual Family Counseling

5503 Crawford Street, Houston, Texas 77004 713 526-2328

ALAN B. BRINSMADE, M.D.
General Psychiatry
Specializing in Psychotic Illnesses-Acute and Chronic

Hermann Medical Center Professional Building
Houston, Texas 77025, 713 524-8496

PERRY C. TALKINGTON, M.D.
Psychiatry

4645 Samuell Blvd., Dallas, Texas 75228, 214 381-3849

CHARLES B. COVERT, M.D.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy

San Felipe Green Professional Building, Suite 314
1900 Yorktown, Houston, Texas 77056; 713-627-9988

TMA Automobile Lease Program
. . . Another service of your association

Psychiatry & Neurology

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., J. J. Leyva, M.D.

Department of Psychology
Allen Goss, Ph.D., Jim M. Phillips, Ph.D.
Practice Limited to Neurology and Psychiatry
Office Hours By Appointment

First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

STEPHEN WEISZ, M.D.
Practice Limited to Neurology and Psychiatry

1637 Medical Arts Bldg., Dallas, Texas 747-5183

HAUSER CLINIC
Psychiatry, Neurology, Electroencephalography and Electromyography

Section of Psychiatry
•Abe Hauser, M.D.
•Robert I. Hauser, M.D.
•H. James Stuart, M.D.
Javier A. Zapata, M.D.
•Susan B. Darsey, M.D.
•Harvey A. Rosenstock, M.D.

Section of Psychology
Ken R. Vincent, Ed.D.

Administrator
Richard J. Kurzenberger

Section of Neurology
•Gerald Ratinov, M.D.
•Robert M. Gordon, M.D.
•Ronald DeVere, M.D.

Section of Social Work
Pamela Plimmer, A.C.S.W.
Marguerite Papademitriou, A.C.S.W.
Margery Engel, M.S.S.W.
Jean Lerner, M.S.W.

808 Memorial Professional Building, Houston, Texas 77002
Telephone 713-224-5041

•Diplomate, American Board of Psychiatry and Neurology

THE FORT WORTH NEUROPSYCHIATRIC CENTER
•Herbert G. Rush, M.D.
A. Arauzo, M.D.
Sanford Lehrer, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

•Diplomate American Board of Psychiatry and Neurology

H. KORNBLIT, M.D.
Neurology—Headache Clinic

Memorial City Prof. Bldg. #176
902 Frostwood, Houston, Texas 77024

MEMORIAL NEUROLOGICAL ASSOCIATION
Neurology, Electroencephalography, Electromyography and C. T. Scan

Harris M. Hauser, M.D., F.A.A.N.
Cheor J. Kim, M.D.
Lorenzo Lorente, M.D.
1740 West 27th, Suite 315, Houston, Texas 77008, 713 861-4516
7777 Southwest Fwy., Suite 1004, Houston, Texas 77074, 713 772-4600

Radiology

ROYAL WERTZ, M.D., F.A.C.R.
Practice Limited to Radiology

800 Rusk Street, Amarillo, Texas 79106, 373-8324

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D., D.A.B.R.

RADIOLOGY
109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

Rheumatology

DON E. CHEATUM, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Rheumatology
Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204, 823-4151

RHEUMATOLOGY
Roy M. Fleischmann, M.D.
Diplomate American Board of Internal Medicine

Rheumatology Consultation of Physician Referral

3707 Gaston Avenue, Suite 810, Dallas, Texas 75246; 827-0868

Thoracic Surgery

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.
Maruf A. Razzuk, M.D.

DRS. PAULSON, URSCHEL, RAZZUK AND ASSOCIATES
Thoracic and Cardiovascular Surgery

1201 Barnett Tower
3600 Gaston Avenue, Dallas, Texas 75246, 824-2503

JOHN L. KEE, JR., M.D.
Thoracic Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246, 826-5184

ALLAN L. GRAHAM, M.D., F.A.C.S.
KARAMAT U. CHOUDHRY, M.D., F.A.C.S.
Diplomates American Board of Surgery and Board of Thoracic Surgery
ROBERT W. MILEY, M.D.
Diplomate American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
800 Eighth Ave., Suite 626, Fort Worth, Texas 76104, 332-7878

Thoracic Surgery Associates
ROBERT E. CARR, M.D., F.A.C.S.
ROBERT N. McGEHEE, M.D.
Thoracic and Cardiovascular Surgery
Diplomates American Boards of Surgery and Thoracic Surgery

532 Medical Plaza, 800 Eighth Ave., Ft. Worth, Texas 76104, 332-2720

HECTOR O. YANES, M.D., P.A., F.A.C.S., F.A.C.C.
Cardiac, Vascular and Thoracic Surgery

Diplomate American Board of Surgery and
American Board of Thoracic Surgery

432 Medical Plaza, 800 Eighth Ave.,
Fort Worth, Texas 76104 332-1947

RICHARD E. WOOD, M.D.
Cardiac, Thoracic and Vascular Surgery

Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890

Hours By Appointment

Urology

JO C. ALEXANDER, M.D., FOSTER FUQUA, M.D.,
ELGIN W. WARE, JR., M.D., GEORGE E. HURT, JR., M.D.,
DONALD E. JOHNSON, M.D. & ASSOCIATES
L. MICHAEL GOLDSTEIN, M.D., THOMAS P. REILLY, M.D.

Urology

3600 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109

Dolphus E. Compere, M.D., F.A.C.S.
Grant F. Begley, M.D., F.A.C.S.
Hugh Lamensdorf, M.D., F.A.C.S.

Diplomates of American Board of Urology

H. M. GIBSON, JR., M.D., F.A.C.S.
ABEL GARDUNO, M.D.
Certified by American Board of Urology
Practice Limited to Urology

512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephone 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
NEWTON F. McDONALD, M.D.
JAMES E. MORNEAU, M.D.
Practice Limited to Urology

1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

DONALD J. NEESE, M.D.
H. R. WAGNER, M.D.
Practice Limited to Urology

218 Hermann Professional Building
Houston, Texas 77025, Telephone: 713 521-9538
400 Medical Center Blvd., Suite 207
Webster, Texas 77598, Telephone: 713 332-2466

EUGENE R. TODD, M.D., P.A.

Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3434 Swiss Ave., Suite 406, Dallas, Tex. 75204, 214 826-3500

DALLAS UROLOGY ASSOCIATES

David D. Reisman, M.D.
Donald J. Logan, M.D.
Allen S. Plotkin, M.D.
Donald L. McKay, M.D.

Practice Limited to Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

DIRECTORY RATES & DATA: Space is available to TMA members at $12.50 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. Section headings are limited to those specialties designated by the American Medical Association. A list of these specialties is available upon request. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

No one wakes up thinking, "Today I'm going to abuse my child."

Abuse is not something we think about, it's something we do.

Last year in America, an estimated one million children suffered from abuse and neglect, and at least 2,000 of them died needless, painful deaths.

The fact is, child abuse is a major epidemic in this country.

The solution? Part of it lies in your hands. With enough volunteers, local child abuse prevention programs could be formed to aid parents and children in their own communities. With your help, eighty percent of all abusers could be helped. Please. Write for more information on child abuse and what you can do.

What will you do today that's more important?

A Public Service of This Magazine & The Advertising Council

We need your help. Write:

National Committee for Prevention of Child Abuse, Box 2866, Chicago, Illinois 60690

Classified Advertising

Physicians Wanted

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from the big city problems. Call collect Dr. David M. Pogue at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6388.

PSYCHIATRIST, board certified or eligible needed for modern forensic psychiatry program. Texas license required. Salary $34,000+. Immediate openings. Call or write: Robert B. Sheldon, M.D., Superintendent, Rusk State Hospital, P. O. Box 318, Rusk, Texas 75785; 214-683-5481.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL INTERNIST WANTED: Board certified or eligible to join expanding successful group. Busy hospital and office practice. Houston environs. Excellent salary and fringe benefits. Contact Doctors Clinic, 1501 Broadway, Galveston, Texas; attention Robert Walsh, Administrator.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic; adjacent to 36 bed hospital, recently remodeled. Salary $40-48,000 per year. Partnership available after trial period. Contact Willis G. Youens, Jr., M.D., 105 N. Grohmann, Weimar, Texas 78962; 713-725-8545.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

EMERGENCY DEPARTMENT GROUP, HOUSTON AREA, EXPANDING—choice of salary or fee-for-service with guarantee—malpractice paid—Call 713-861-7942 or write Greater Houston Emergency Physicians Association, 625 West 19th, Houston, Texas 77008.

FAMILY PRACTICE—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas 512-672-2811.

FAMILY PRACTITIONER WANTED TO ASSOCIATE with well established solo practitioner to handle patient overflow. Alternate weekend coverage, etc. Space available, reasonable. X-ray and full lab in building. Desire experienced FP with holistic approach. No hospital practice necessary. Please reply to Ad-652, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTITIONER WANTED to join two established family practitioners in Trinity, Texas. Former partner is leaving November 1976 for residency. A large ready made practice is available now. You are invited to investigate clinic and hospital facility, compatibility, economic and environment of rural practice in an outstanding recreational area that includes 2,000,000 acres of East Texas forest, 90,000 acre Lake Livingston, various golf courses, marinas, and country club developments. All guarantees, etc. are negotiable. Bring your wife. Sam R. Barnes, M.D. and J. Richard Cook, M.D., P.O. Box 672, Trinity, Texas 75862.

PSYCHIATRIC RESIDENCY in approved three-year program. Effective connections with universities, medical schools, private clinics and community centers. Outstanding faculty and programs. Stipends with Texas license are $15,000, $16,000 and $17,000 per year. In addition, now offering residency in child psychiatry. For full information, write to Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

CHILD PSYCHIATRY RESIDENCY may be taken before or after adult psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psychopharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed in-patient unit for children. Liaison with graduate schools, medical school and community programs. Stipends: First year, $15,000; second year, $16,000; third year, $17,000; fourth year, $18,000. Contact Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

WANTED: BOARD CERTIFIED OR ELIGIBLE OBSTETRICIAN-GYNECOLOGIST to join multispecialty clinic in Houston. Starting salary competitive, early partnership available. Contact Business Manager, Glen Valley Clinic, 7640 Bellfort, Houston, Texas 77061; 644-3344.

INTERNIST—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

PEDIATRICS—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

FAMILY PRACTICE, GENERAL PRACTICE—Wanted immediately to join physician staff in rural community one-hour from Dallas-Fort Worth area. Extremely active practice with good benefits and an opportunity to enter into the corporation. Practice is with physicians clinic, 26-bed hospital, and 42-bed nursing home within the same building complex. Excellent arrangement for family practice. For further information contact Roger E. Marks, M.D., 817-897-2215 or 817-897-4436; Glen Rose, Texas.

FAMILY PRACTITIONER FOR MULTISPECIALTY CLINIC in Houston's fastest growing Southwest area. Salary guarantee and early partnership. Excellent radiographic and diagnostic facilities in new clinic building adjacent to hospital. Contact Pierre Gendron, 6630 DeMoss, Houston, Texas 77074.

EMERGENCY MEDICINE GROUP PRACTICE in Texas. Salary $44,000 with many fringe benefits. Send resume to Houston E.P.A., 8700 Commerce Park Drive, Suite 121, Houston, Texas 77036.

WANTED: INTERNIST TO JOIN busy solo internist in new office. Complete clinical laboratory facilities plus x-ray. City of 25,000 population in Northeast Texas. Drawing area of 100,000. Two new hospitals. High caliber medical community. Excellent recreational facilities; good schools and churches. Ideal family city. Please reply to Ad-625, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EXCELLENT OPPORTUNITY FOR ONE OR TWO FPs. North Central Texas, small town, large lake. Large cities nearby. Exceptional recreation on doorstep. Clinic adjacent to new hospital. New schools, churches, homes. On-call time with three others. Solo or group. Salary guarantee. Growing area. Help needed badly. Please reply to Ad-663, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN WANTED: FAMILY CARE AND CHRONIC. Hospital facilities available ten miles. Clinic space available downtown Kemp. Pharmacy available. 45 miles southeast Dallas. Close to Cedar Creek Lake, fastest growing recreational-retirement area in Texas. Projected 100,000 population by 1980 in area. Country club, golf course, three miles. Excellent opportunity. Please reply to Edmund Horton, Ph., P.O. Box 449, Kemp, Texas 75143; phone 214-498-2011.

STAFF PHYSICIAN NEEDED FOR STATE HOSPITAL. Progressive 750 resident state institution. Eligibility for Texas licenses required. 40 hour work week, paid vacation, sick leave, holidays, good retirement plan, free group insurance. Kerrville is known as a retirement center. Prefer mature physician over age 50. Please contact Luther W. Ross, M.D., Superintendent, Kerrville State Hospital, P.O. Box 1468, Kerrville, Texas 78028 or phone 512-896-2211. We are an equal opportunity employer.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $10.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER WANTED—Growing hospital in progressive East Texas town near metroplex needs an ambitious general practitioner to join staff. Community and hospital very cooperative in helping to establish your practice. Call (214) 845-2281, or write to Milton Bolgiano or Paul Bennett, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75647.

WANTED: INTERNISTS, GENERAL OR WITH SUBSPECIALTIES in oncology and hematology or gastroenterology to practice with a sixteen member multispecialty association in East Texas. New building, nuclear medicine, linear accelerator therapy unit. Travis Clinic, P.O. Box 870, Jacksonville, Texas 75766, or call 214-586-2505.

WANTED: FAMILY PRACTITIONER TO JOIN three man group. East Central Texas. New joint commission approved 30 bed hospital. Airport. New junior-senior high complex. Railroad division point. Small industry. Primary income ranching. Three fishing lakes. Deer, quail, dove hunting. Country club. No initial investment necessary. Contact Drs. Gage, Cox or Halbert, 315 Main Street, Teague, Texas 75860, 817-739-2561.

WANTED: PSYCHIATRIST/NEUROLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

OPPORTUNITY FOR OPHTHALMOLOGIST AND OTOLARYNGOLOGIST in Central Texas. Trade territory of 75,000-100,000. Only one ophthalmologist and no otolaryngologist following retirement of physician doing EENT. New hospital with 160 beds and all modern equipment. The need is great and the opportunity is unlimited. Contact Braswell Locker, M.D., Route 3, Box 184, Brownwood, Texas 76801.

FP, PED, INT NEEDED for 18 member group in Dallas area. 100 bed fully accredited hospital. Minimum $2500 month guarantee plus bonus. Benefits include profit sharing, pension plan, good vacation plan, malpractice insurance, time off for post graduate training. Contact: North Texas Clinic Association, 3330 S. Lancaster Road, Dallas, Texas 75216.

HALF-TIME-20 HOURS A WEEK MEDICAL ADVISOR, Austin Independent School District. Primary responsibility for providing medical consultation. Most of time spent in the schools providing selected medical services for school health program. Salary $15,000 to $18,000 depending on experience and whether or not board certified. Mileage reimbursement—innovative program. Contact Dr. H. L. Gaines, 6100 Guadalupe Street, Austin, Texas 78752.

PEDIATRICIAN WANTED: Three associated board certified pediatricians with 20 year practice. Position open July 1977 when one associate leaves to pursue different specialty. Office in Northeast Dallas, choice Dallas, Richardson, Highland Park schools. Large patient drawing area. Middle to high middle class income patients. 300 bed hospital two blocks away. Ad-677, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

NEED FULL TIME MEDICAL DIRECTOR and full time center physician and part-time center physician at medical facility of Gary Job Corps Center in resort community of San Marcos, Texas. Essentially, involvement is 8 a.m. to 5 p.m., Monday through Friday and on call alternating nights and weekends. Attractive salary with fringe benefits including three bedroom house for each physician. Contact Mr. Alfred Perkins, Center Director, 512-396-6652 for appointment and/or further information.

INTERNIST with training in allergy. Nothing to buy except office equipment. $200,000 net annual income. Retiring from practice July 1, 1977. V. E. Friedewald, M.D., F.A.C.P., 2203 West Tennessee, Midland, Texas; 915-682-5385.

FAMILY PRACTICE in a trade area of 18,000. New 42 bed hospital. Office space for lease or purchase. Good diversified economy. Excellent hunting. Contact Harold L. Boening, Administrator, Karnes County Hospital District, Box 450, Kenedy, Texas 78119; 512-583-3401.

PHYSICIANS NEEDED IN GROVETON, TEXAS. Located 100 miles north of Houston and 187 miles south of Dallas. Located in the heart of Davy Crockett National Forest in East Texas. Only minutes from Lake Livingston, golf course, and county airport. Excellent school system. Three colleges within driving distance. Modern hospital and nursing home. Clinic space with three complete examining rooms available. Contact: Randall L. Archer, Jr., P.O. Box 815, Groveton, Texas 75845; 713-642-1221.

TEXAS PRACTICES. Economic and professional climate excellent. Texas now reciprocates with all States except Florida. Have requests from physicians in communities for additional physicians, usually in the same field. City suburbs, small and medium size towns. Attractive financial guarantees. No fee to physician. Please write with C.V. and preferences to Sanford Smith, Professional Practice Management, Inc., 1102 Kingwood Drive, Humble, Texas 77339.

THREE PHYSICIAN VACANCIES: One from internist who must be board eligible or certified; one for a surgeon who must be board eligible or certified and one for a general practitioner. 408 bed center comprised of a hospital, nursing home care unit and domiciliary. Active medical and surgical service with intensive care unit. Respiratory care unit and outpatient treatment. Located in warm climate of Texas, 65 miles from downtown Dallas. Salary based on education, experience and background. Recently enacted legislation provides for special bonus pay in addition to base salary. Paid vacation, sick leave, malpractice, life and health insurance. Reasonable housing available in local community of 8000. Interested physicians please contact Chief of Staff, Sam Rayburn Memorial Veterans Center, Bonham, Texas 75418. Telephone 214-583-2111, ext. 212. Inquiries confidential. An equal opportunity employer.

FAMILY PRACTICE ASSOCIATE—Southeast Texas town 100 miles east of Houston. General area population 70,000. Hospital privileges available at local accredited hospital. This is a well developed practice that requires no OB or surgery unless desired. Full time emergency room physicians are available; therefore, minimal emergency room "off hour" coverage required. Malpractice insurance premium paid. No initial investment required. $42,000 salary guaranteed for first year with opportunity to participate in ownership of practice after first year. Subsequent earnings potential excellent. Possible to exceed $100,000 2nd year. Medical-Dental Management, Inc., P.O. Box 55967, Houston, Texas 77055, or call 713-468-5875.

ORTHOPEDIC SURGEON NEEDED for 70 bed community hospital near Dallas. About 40 fractured hips admitted per year; other fractures can be estimated using this number as a guide. Medical staff of 15 members would refer all orthopedics. Reply to Ad-687, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL INTERNIST AND FAMILY PRACTITIONER NEEDED to join nine man group in Clifton, Texas. Located in the heart of Texas, 30 miles NW of Waco; 15 miles from Lake Whitney. Good fishing; excellent hunting; new modern golf course. Excellent schools and churches in a growing progressive community and directly associated with a 75 bed. Hill Burton hospital which is fully accredited by the joint commission. Terms open at first with partnership in future. Please contact V. D. Goodall, M.D., Clifton Medical & Surgical Clinic Association, Clifton, Texas 76634. Telephone 817-675-8621 or 675-3113.

LOCUM TENENS NEEDED June, July, August 1977. Salary could be arranged. Association a strong possibility, if desired. Contact 2601 Hospital Blvd., Corpus Christi, Texas 78405; 512-884-3966 (call collect).

FP/GP WANTED: Morton (Cochran County), Texas. 55 miles west of Lubbock. Solo practice, fee-for-service, with other physicians in clinic. One GP in area. Office space available, fully furnished, Cochran Memorial Hospital and Clinic. Income dependent upon how hard willing to work. Open staff, 30-bed hospital. County seat, good churches, airport. Major income farming, ranching, oil fields. For further information contact: Truman Swinney, Cochran Memorial Hospital and Clinic, 201 East Grant, Morton, Texas 79346; 806-266-5565.

GENERAL PRACTITIONER WANTED: Due to retirement of one of staff because of ill health, urgently need qualified GP. No investments; no house calls; excellent schools, churches, recreational facilities, two fine junior colleges. Retiring doctor has been netting $50,000 per annum. All members of staff on the staff of local, fully accredited general hospital. Call or write Stripling Clinic, 555 So. Jackson, Jacksonville, Texas 75766. Phone 214-586-2278.

Situations Wanted

GENERAL SURGEON (Board certified, DABS), bilingual (Spanish and English). Texas license. Seeks association, partnership, group or hospital. Prefer South Texas. Contact Dr. Domingo Galliano, 720 West 170 St., New York, New York 10032.

SEEKING LOCATION: UROLOGIST, 36, Flex. Completing training in June 1977. Desires group, associate or solo practice. All areas considered. Available in July 1977. Please reply to Ad-673, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

DERMATOLOGIST: Board certified, 10 years successful solo practice in one location. Wishes to relocate in larger city or metropolitan area either group or solo practice. Please reply to Ad-681, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PSYCHIATRY — male, 39 years old with D.P.M., F.R.C.P.(C), A.B.P.N. Widely experienced in psychiatry for last 10 years. Seeking position in university, CMHC, state hospital or private practice. Available from beginning of 1977. For further information contact Ad-683, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OB/GYN—female, 34 years old, specialty board certified in UK. Board written passed in 1976. Practicing OB/GYN as specialist for last three years. Special experience in laproscopy. Seeking position in private practice, hospital or teaching. Available from beginning 1977. For further information contact Ad-684, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SEEK EMERGENCY ROOM full-time, 38 years old. Please reply to Ad-685, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SENIOR PHYSICIAN, well qualified and experienced. Prefer southern part of Texas. An association or working agreement. Available after three months. Please reply to Ad-688, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL INTERNIST: Seeking primary care opportunities with other internist(s) in group or associate situation located preferably in Northeast Texas with drawing area 100,000. Available July 1977; will take ABIM this year; age 28. Please offer specific information concerning needs, facilities, and medical community with initial response. Contact Ad-686, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

AUSTIN—NEW PROFESSIONAL PARK. Internist, GP, FP, Peds, OB/GYN sought to associate in group setting for solo practice. Physician population has not kept pace with accelerated growth. University town, new hospital. Call or write: Cannon Professional Park c/o 3913 Medical Parkway, Austin, Texas 78756. Telephone 512-451-8489.

NEW ULTRA-MODERN, cedar and glass office space for lease in Northwest San Antonio, one block from loop 410 and one exit from IH 10. Across the road from Park North Hospital, the building is divided into six separate office spaces, four of which are occupied by 4 general dentists, one orthodontist, and three oral surgeons. Up to 4700 sq. ft. available at 60c sq. ft. with a very liberal allowance to finish out to your specifications. Ideal situation for the family practitioner or pediatrician. Contact Mossrock Venture, 2803 Mossrock, Suite 201, San Antonio, Texas 78230.

USED Picker Radiographic and Fluoroscopic x-ray unit complete with a 500 MA single phase generator, 9 inch Image Intensifier, TV, and a linear tomography attachment. Used M-4 Kodak automatic film processor. If interested contact Chairman, Radiology Department, Malone-Hogan Clinic, 1501 W. 11th Place, Big Spring, Texas 79720; phone 915-263-1211, ext. 194.

OPHTHALMOLOGY EQUIPMENT. Two chairs, one treatment, one refracting with Green's refractor and Copeland streak retinascope. Cabinets, display rack and desks. Contact Joe Gallagher, M.D., 401 Rose Marie, Hearne, Texas 77859; 713-279-3672 weekends. Apt. 136, Western Hills Village, Temple, Texas 76501; 817-778-5661 weekdays.

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

WANTED: Office space and/or good, used office, medical instruments, and laboratory equipment. Urgently needed for one or two doctor family practice clinic in Austin, Texas. State price and inventory. Please send replies to Ad-682, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INDUSTRIAL PHYSICIAN

Full time staff physician is needed in Du Pont plant near Victoria, Texas. This petrochemical plant with 1300 employees, has a well equipped plant medical center with excellent preventive medical program. 40 hour week. No malpractice insurance needed. Competitive salary and liberal benefit package are offered.

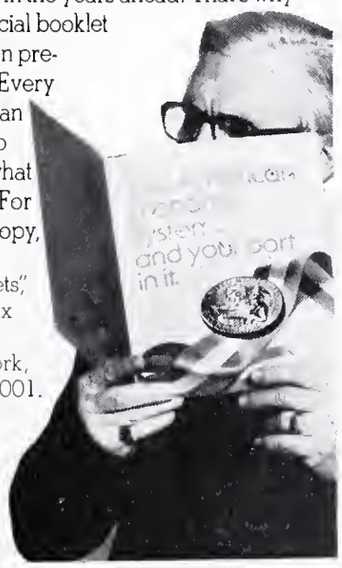
If interested, write or call:

Oscar Rhode, M.D.
P. O. Box 2626
Victoria, Texas 77901
Phone (512) 573-3211 Ext. 324

E. I. DU PONT DE NEMOURS AND COMPANY INCORPORATED
An Equal Opportunity Employer M/F

How much change does our American Economic System need: A lot? A little? None?

The more we all know about our system and how it works, the better we can decide what to preserve, what to change in the years ahead. That's why this special booklet has been prepared. Every American ought to know what it says. For a free copy, write: "Booklets," P.O. Box 1887, New York, N.Y. 10001.



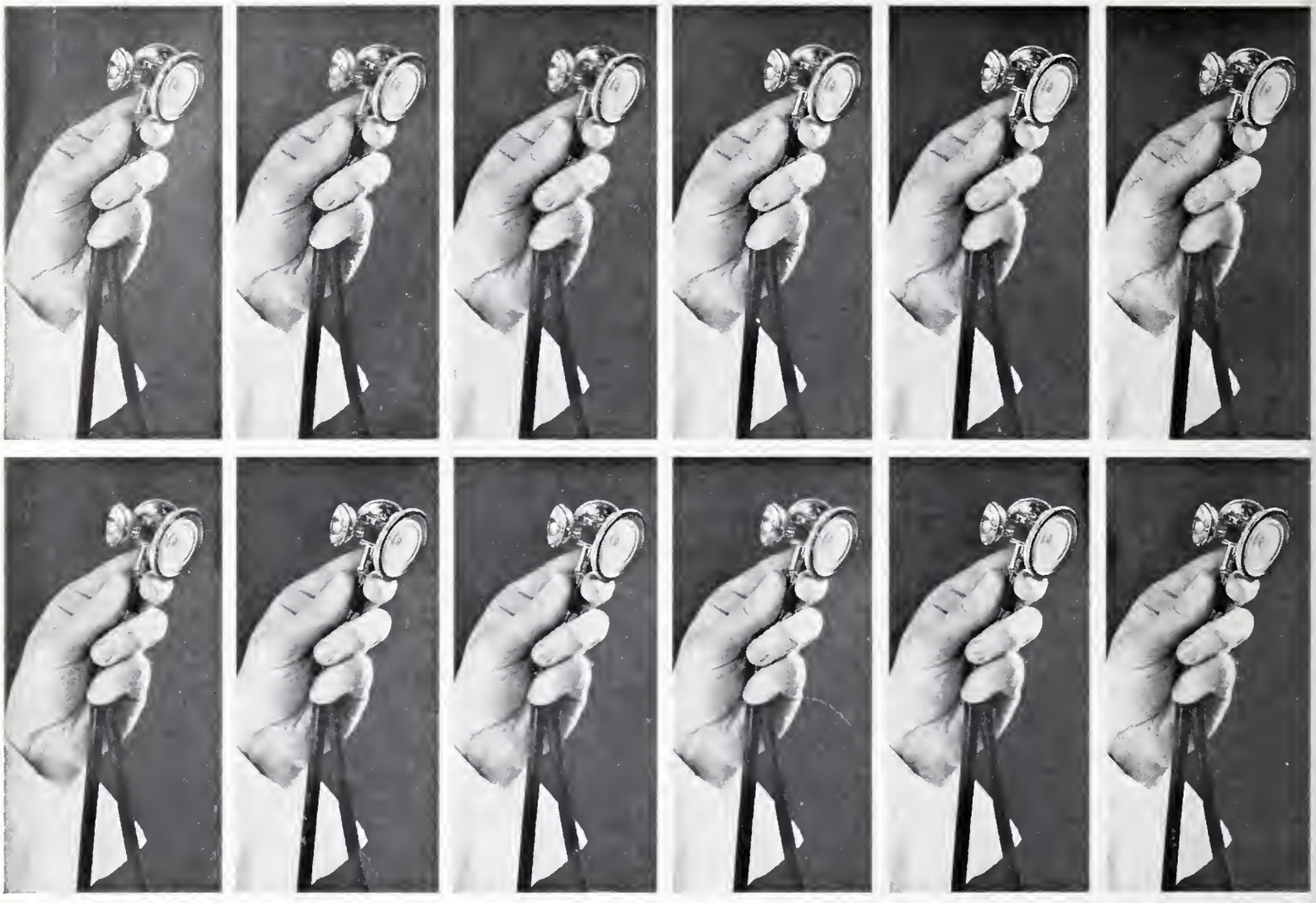
A public service of The Advertising Council & U.S. Department of Commerce presented by this Magazine.

Advertising Directory

Air Ambulance of America	14
Armour	45
Beltone Electronics	17
Beverly Hills Hospital	93
Burroughs Wellcome Co.	74
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
E. I. DuPont De Nemours & Co., Inc.	117
Flint Laboratories	84
Gentec Hospital Supply Co.	118
I* Care	30
Intrav Travel Adventure	72
Ives Laboratories	32
Mead Johnson Laboratories	43
Kelsey-Seybold Clinic	61
Lederle Laboratories	62
Eli Lilly and Company	46
Mallinckrodt	63-64
Medical Arts Clinic of Corsicana	94
The Medical Protective Company	61
Joe Nigrelle Insurance Agency	94
Parke Davis & Co.	4
Pasadena Bayshore Hospital	102
Pennwalt Corp.	18-19
The Pharmaceutical Manufacturers Association	120-121
Practice Productivity, Inc.	23
The Prudential Insurance Company of America	9
Ben H. Quinney, M.D.	94
A. H. Robins Company	85-86, 87
Roche Laboratories	1-2, 71, 100-101
Roerig & Co.	30-31, 38-39
San Antonio Mid-Winter Seminar	3rd Cover
Schick Hospital	99
Scott and White Clinic	Back Cover
Smith Kline & French	20
Starlite Village Hospital	103
Texas Bank and Trust Company	30
Texas Medical Association	
Annual Session	95-98
Automobile Leasing Program	104
Memorial Library Fund	90
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchins, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	94
Upjohn	37
Warner-Chilcott	5, 44-45, 73
Wichita Falls Clinic	103
Physicians' Directory	105-114
Classified Advertising	115-117

Publication of an advertisement in *Texas Medicine* is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

Keep your office in good health.



Give it regular checkups.

Just like a patient, your office deserves proper attention. Equipment and supplies should be given regular checkups to make sure it's readily available and in good working order. And when you come up short, the Gentec Hospital Supply phone number should be close at hand.

Gentec provides a complete line of office supplies and equipment, plus training for your staff in the operation of all medical equipment. A periodic safety inspection program we call "Safety Through Service" to insure the operational efficiency of your equipment and machines. And fast delivery because you require it.

We know you have your share of emergencies. But when you rely on Gentec — supplies and equipment won't be among them.

Gentec
Hospital Supply Company
Division of Foremost-McKesson, Inc.
TERRELL SUPPLY DIVISION

P.O. Box 310, Fort Worth/Dallas 76101
Phone: AC 817 336-8731
Metro: AC 214 429-2566

P.O. Box 4415, Austin 78723
Phone: AC 512 478-2559

P.O. Box 32107, San Antonio 78216
Phone: AC 512 344-0213

P.O. Box 1587, Amarillo 79106
Phone: AC 806 376-4696

P.O. Box 2913, Lubbock 79408
Phone: AC 806 763-4655

P.O. Box 1609, Houston 77001
Phone: AC 713 237-9678

Letters

More Articles on Ethics

Dear Ms Baker:

I welcome the article, "Medical Consultation: Art, Etiquette, Ethics," by Stanton J. Barron, MD, which appeared in *Texas Medicine* (August 1976).

There are other areas in the practice of medicine where, I feel, a discussion on art, etiquette, and ethics would also be worthwhile. Usually, examples regarding ethics analyze relationships among physicians who are "on an equal level," independent, and often self-sufficient.

There are, however, problems in ethics involving physicians who are "on a different level" within the hierarchy, or paramedical problems, which also include questions of etiquette. Just to mention a few:

1. Licensed physician in training as an intern or resident, and his relationship with the teacher-faculty physician, and vice versa, such as examination-type discussions in the presence of nonphysicians.

2. Physician-head of a hospital unit (eg, service, division, department) and his relationship with subordinate physicians, and vice versa, such as examination-type discussions in presence of residents, interns, medical students, and nonphysicians.

3. Physician as "captain of ship" or as ad hoc head of a team (eg, first surgeon), and his relationship to other physicians of such team, and vice versa.

4. Ethics of furnishing a "confidential reference" about a colleague who applies for a new job or project. Is it ethical to write or telephone an opinion about a colleague, just on the basis of a letter or call from the prospective employer, without notifying the applicant about such reference, or its content? Conflict of opinion is nicely described by Dr. Barron; does this apply analogically to this situation, too—namely, giving to the applicant an equal opportunity to express his view?

5. There are institutions where the patient cannot choose his physician, nor can the physician choose whether or not to accept a patient. The physician is salaried and does not charge a fee for service. Refusal to accept a patient might even cost him his job.

6. A physician employed by an institution wishes to relocate and must give notice. What are his ethical duties toward his supervisors and his subordinates? What are their ethical responsibilities toward him? Are there any rules of ethics or etiquette regulating when and where a physician may or may not relocate (eg, within the institution, city, or area), or requiring that he keep his superior physician posted as to where he applies for the new job, or has specific job interviews?

7. With computerized billing systems, the offering of professional courtesy is sometimes quite difficult to handle. Regardless of whether professional courtesy is offered, the computer center sends out the bill and urges payment, and the treating physician usually doesn't even know about it. In a computerized world, is professional courtesy practicable, or has it become an anachronism?

I would appreciate very much reading about such problems in *Texas Medicine*.

(Name withheld on request)

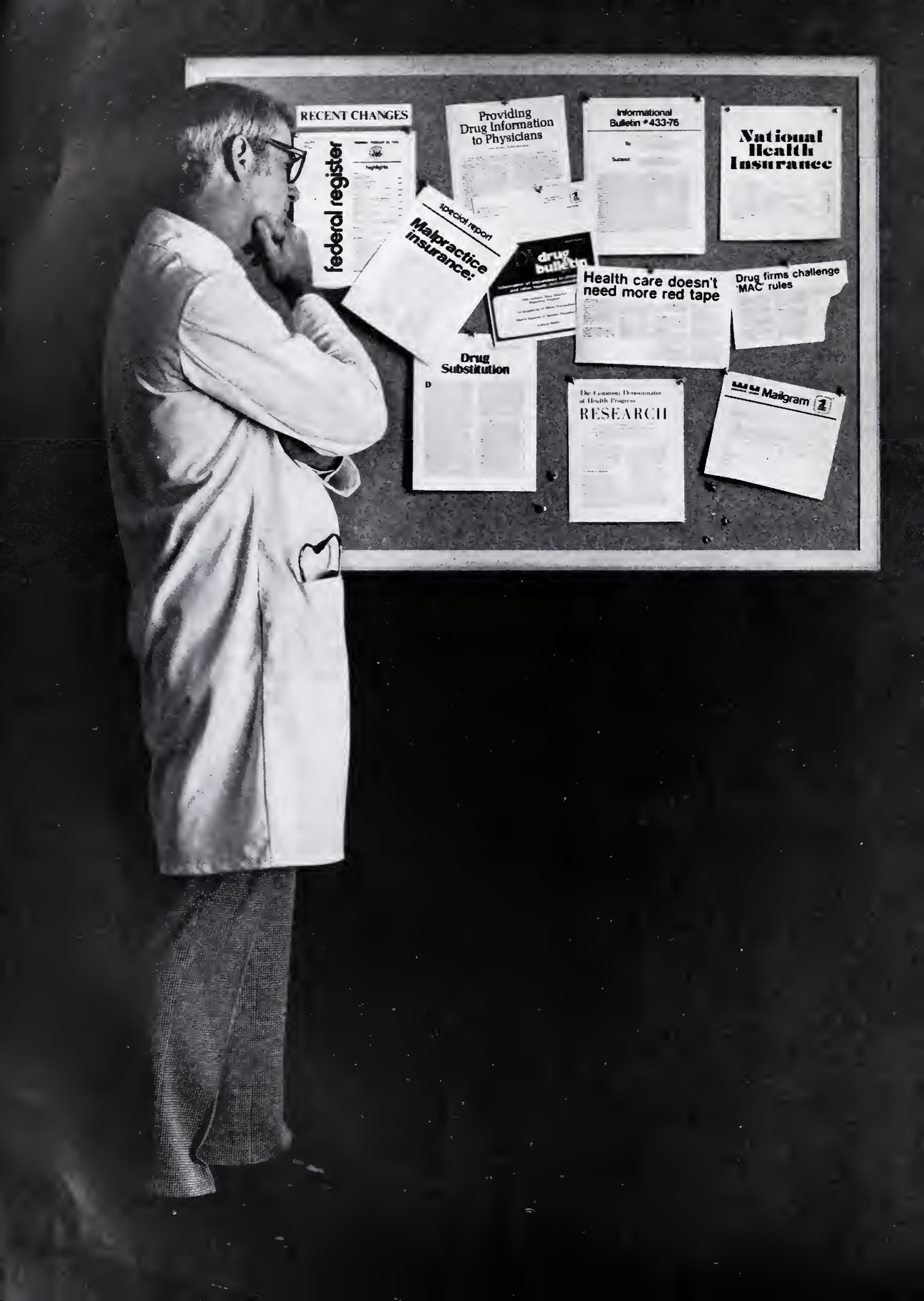
Münchausen's Syndrome

Dear Ms Baker:

I am currently engaged in research on Münchausen's syndrome (hospital addiction) and its variants. I would like to correspond with any other physicians who have had personal contact with such patients, and would appreciate it if you would print this letter in your "Letters" section. All responses should be addressed to: S. E. Hyler, MD, 5620 Netherland Ave, Riverdale, NY 10471.

S. E. Hyler, MD, Riverdale, NY.

Letters to the Editor are welcome for consideration in this column. The Board of Publication and the editors reserve the right to excerpt letters in accordance with available space and editorial judgment as recommended by consultants. Neither the editors nor TMA shall be, in any manner or to any extent, directly or indirectly, responsible for views expressed by authors in this column.


RECENT CHANGES
federal register
Providing Drug Information to Physicians
Informational Bulletin #433-76
National Health Insurance
special report
Malpractice insurance:
drug bulletin
Health care doesn't need more red tape
Drug firms challenge 'MAC' rules
Drug Substitution
The Common Denominator of Health Progress
RESEARCH
Mailgram

THERE ARE A LOT OF PEOPLE GETTING BETWEEN YOU AND YOUR PATIENT.

Medicine today is in the spotlight, subjected to all kinds of scrutiny. Your control over patient therapy is being monitored, judged and occasionally abrogated, sometimes by unknown third parties.

The worry is that in the wake of this focus, the relationship between you and your patient will be weakened, without offsetting benefits. Consider three examples:

Drug substitution In most states, pharmacy laws, regulations or professional custom stipulate that your non-generic prescriptions be filled with the precise products you prescribe. But in the last five years, a dozen or more State laws have been changed, permitting the pharmacist in most cases to select a product of the same generic drug to fill any prescription.

Ironically, this dilution of physician control has taken place against a background of growing evidence that purportedly equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA itself says it has not enforced the same standards for hundreds of "follow-on" products that it had applied to the original NDA approvals. Thus physician control over patient therapy is being eroded with a risk that patients may be exposed to drugs of uncertain quality.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant savings has been produced.

MAC Maximum Allowable Cost, MAC for short, is a Federal regulation designed to cut the Government's drug bill by setting price ceilings for drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the Government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right. Practicing doctors will have little to say about administration of the program, since Government will have absolute authority to make its choices stick.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to your patients: The cost of the research is more than ten times what it was, per product, in 1962; and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present approval process contributes to needless delay of needed therapy. That's why the increased efficiency of the drug approval process is vital to all our futures.

If these issues concern you, we suggest that you make your voice heard—among your colleagues and your representatives in State legislatures and in Washington.

It could make a difference in your practice tomorrow.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

Editorials

WHO'S MINDING YOUR FUTURE? YOUR LEGISLATOR, THAT'S WHO!

Now, as you skim your journals and mentally review your day, people in Austin are making decisions that you will have to live with as long as you provide or receive medical care.

If you are curious about today's legislative developments, just dial 1-800-252-9231—TMA's toll-free legislative hotline.

Even before the 65th Texas Legislature convened, TMA attorneys and the Council on Medical Legislation were collecting and reviewing and weighing the good, bad, and neutral parts of some 125 prefiled bills which could affect health care matters and agencies in Texas.

Shortly after the session started, physicians crowded into the Joe C. Thompson Conference Center in Austin for an all-day symposium, "An Update on Legislative Issues."

Of course the top issue in most doctors' minds is professional liability insurance. At the time of writing, a TMA bill, Medical Liability and Insurance Improvement Act, had been prefiled as Senate Bill 103 and House Bill 370, and SB 103 had been referred to the jurisprudence committee.

In addition to professional liability insurance, your representatives are grappling with pros and cons of all sorts of other health-related issues.

Legislators also have constituents—vocal, voting, visible, letters-to-the-editor-writing constituents—who prefer that their elected representatives devote major efforts to matters other than health and medicine.

And so begins a new legislative session in Texas.

The issues are a little different; there are some new faces around the Capitol; we all are two years busier and ought to be two years wiser; and it has been a rough couple of years for people in politics.

Nevertheless, the basic rules still apply: Let your legislators know what you think, and give them some good reasons for agreeing with you. Call. Write. Assure them that they are needed and appreciated—they're people, too.

Address legislators as follows: The Honorable John Doe, Texas Senate, P O Box 2068, Austin, TX 78711; or The Honorable Jane Doe, House of Representatives, P O Box 2910, Austin, TX 78769.

It isn't too early to start supporting the prefiled TMA bill on professional liability insurance. In fact, now is the best time to write or call your legislator . . . .

TMA LEADERS SET DIRECTIONS FOR ASSOCIATION WORK IN 1977

It was the Sunday before Christmas, and all through the house were Executive Board and staff people working as hard as Saint Nicholas' elves.

The business at hand was the establishment of specific priorities and goals for the Texas Medical Association for 1977, and also the delineation of responsibility for each task. TMA's leaders had dedicated time and effort to deciding the directions to be taken, the goals to be reached, and how to allot the work involved in getting there.

It was not a simple job. The issues affecting medicine have grown like suburbs, and the volume and complexity of the work involved has increased proportionately. Sorting out priorities was, therefore, essential but by no means easy.

In preparation for the meeting, council chairmen had set forth priorities for their own groups and were on hand to present and discuss them. A report of the meeting appears on page 10.

Although Christmas wasn't on the agenda, TMA president L. S. Thompson, Jr, MD, who called the meeting, might have considered borrowing Santa's magic chimney, since his winged sleigh circled Austin's fogbound airport until after the meeting began. Vice-president Sheridan S. Evans, MD, saw to it that the business was handled without undue delay.

Probably one of the best things to come out of this meeting is the assignment of specific responsibilities to specific boards, councils, and committees. It will enable each group to proceed apace with well-defined duties and a clear understanding of what is expected.

Certainly this is an efficient way to handle multiple and complex areas of activity, and the end result should be greater accomplishment with minimal confusion.

lar77 TexasMedicine

...ain of the ship" doctrine scuttled / Gas in portal vein of adults with necrotizing enteropathy
...h pacifier to prevent nursing bottle syndrome / Bacteremia in a metropolitan teaching hospital

LIBRARY
U.C. SAN FRANCISCO
MAR 15 1977

Torbett-Hutchings-Smith Memorial Hospital
and Torbett-Hutchings-Smith Clinic

322 Coleman Street
Post Office Box 60

Marlin, Texas 76661

Telephone: 883-3561

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M. D., F.A.C.S.
Cecil A. McRee, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M. D.
C. G. Brown, M.D.

VASCULAR SURGEY
Cecil A. McRee, M.D., F.A.C.S.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

TRAUMATIC AND ORTHOPEDIC SURGERY
D. R. Swetland, M.D., F.A.C.S.

ALLERGY
S. W. Hughes, M.D.

CARDIOLOGY
W. F. McKinley, Jr., M.D.

OBSTETRICS AND PEDIATRICS
William Pickvance, M.D.

RADIOLOGY
J.M. Brown, M.D., F.A.C.R.

PATHOLOGY
Ronald E. Henderson, Jr., M.D.
David M. McTaggart, M.D.
S. M. Bunn, Jr., M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

NEUROSURGERY
Harry W. Slade, M.D., F.A.C.S.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Associate Administrator:
Larry Parsons

Director-Coordinator, Nursing Service:
Vera Bee, R.N.

Director of Patient Care:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street

DALLAS, TEXAS 75211

Telephone 823-4151

INTERNAL MEDICINE
John B. Allen, M.D., D.A.B.I.M.
Morris E. Magers, M.D.,D.A.B.I.M.
Channing Woods, M.D.
Richard C. Stone, M.D., Gastroenterology
Landon W. Stewart, M.D., D.A.B.I.M.
Cloyce L. Stetson, Jr., M.D., D.A.B.I.M.
David S. Sowell, III, M.D., D.A.B.I.M., Cardiology
Don E. Cheatum, M.D., D.A.B.I.M., and D.A.B. Rhu., F.A.C.P.
W. Mark Armstrong, M.D., D.A.B.I.M.
Sam W. Waters, M.D.
George E. Thomas, M.D., D.A.B.I.M.
Steven P. Bowers, M.D., D.A.B.I.M.

ORTHOPEDIC SURGERY
George S. Phalen, M.D., D.A.B.O.S., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
John B. Miller, III, M.D.
Vernie D. Bodden, M.D.

PEDIATRICS
Halcuit Moore, M.D., D.A.B.P., F.A.A.P.
P. E. Luecke, Jr., M.D., D.A.B.P., F.A.A.P.
Larry Gray, M.D., D.A.B.P., F.A.A.P.

GENERAL SURGERY
George P. Fosmire, M.D., D.A.B.S., F.A.C.S.
Miller S. Bell, M.D., D.A.B.S., F.A.C.S.

UROLOGY
Harry M. Spence, M.D., D.A.B.U., F.A.C.S.
William H. Hoffman, M.D., D.A.B.U., F.A.C.S.
Richard B. Duiany, M.D., D.A.B.U., F.A.C.S.

RADIOLOGY
Raymond W. Burford, M.D., D.A.B.R.
Joe B. Caldwell, M.D., D.A.B.R.
James B. Evans, M.D., D.A.B.R.

DERMATOLOGY
William N. New, M.D., F.A.A.D., F.A.C.P.

OTOLARYNGOLOGY AND OTOLOGIC SURGERY
D. W. Shuster, M.D., D.A.B.O.

OPHTHALMOLOGY
R. M. Burnside, M.D., D.A.B.O.
James M. Copps, M.D., D.A.B.O.

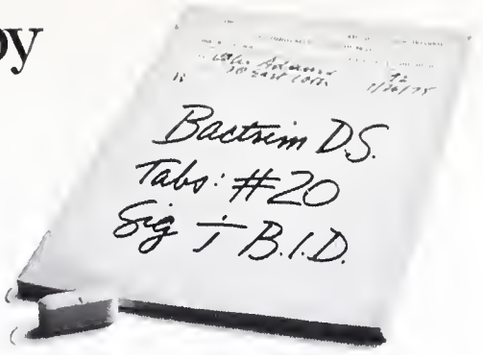
DENTISTRY AND DENTAL SURGERY
J. Boyd Hollabaugh, D.D.S.
William F. Walton, D.D.S.
George D. Blake, D.D.S.
Larry L. Cowsert, D.D.S.

ADMINISTRATION
C. H. Rosamond, Administrator
Jack Green, Associate Administrator

DIRECTOR OF NURSING SERVICE
Miss Billye J. Norris, R.N.

INACTIVE STATUS
George M. Underwood, M.D., D.A.B.I.M., F.A.C.P., Gastroenterology
William H. Potts, M.D., F.A.C.P., Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics and Gynecology
Adam D. Green, M.D., Surgery
B. Celia Slaughter, M.D., D.A.B.P., F.A.A.P.
John B. Bourland, M.D., D.A.B.O.G.

10-day Bactrim therapy outperforms 10-day ampicillin therapy.



In a multicenter, double-blind study of patients with chronic or frequently recurrent urinary tract infection, Bactrim 10-day therapy outperformed ampicillin 10-day therapy by 27.2%, when comparing patients who maintained clear cultures for eight weeks. Criterion for "clear culture" was 1000 or fewer organisms/ml of urine.

While adverse reactions noted in this study were mild (*e.g.*, vomiting, nausea, rash), more serious reactions can occur with these drugs. See manufacturer's product information for complete listing. Maintain adequate fluid intake; perform frequent CBC's and urinalyses with microscopic examination.

Note: Bactrim tablets were used in these clinical trials. Bioequivalency studies show one Bactrim DS double strength tablet is equivalent to two Bactrim tablets.

Bactrim™ DS
(160 mg trimethoprim and 800 mg sulfamethoxazole)
Double Strength tablets
Just 1 tablet B.I.D.

Bactrim™

(80 mg trimethoprim and 400 mg sulfamethoxazole)
2 tablets B.I.D.

For chronic or frequently recurrent cystitis and pyelonephritis due to susceptible organisms.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Chronic urinary tract infections evidenced by persistent bacteriuria (symptomatic or asymptomatic), frequently recurrent infections (relapse or reinfection), or infections associated with urinary tract complications, such as obstruction. Primarily for cystitis, pyelonephritis or pyelitis due to susceptible strains of *E. coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris* and *Proteus morganii.*

NOTE: The increasing frequency of resistant organisms limits the usefulness of antibacterials, especially in these urinary tract infections. The recommended quantitative disc susceptibility method (*Federal Register*, 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. **Data are insufficient to recommend use in infants and children under 12.**

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for children under 12. Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) every 24 hours
Below 15	Use not recommended

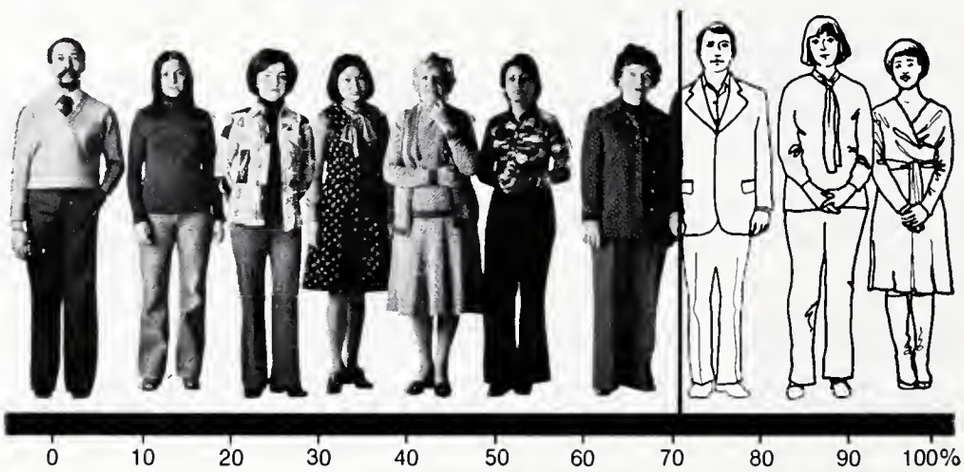
Supplied: Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole — bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10.

Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole; fruit-licorice flavored — bottles of 16 oz (1 pint).

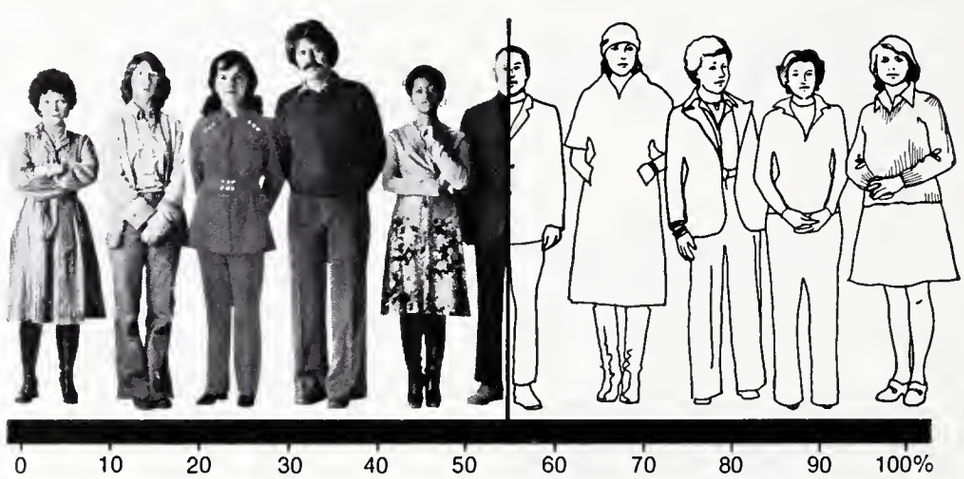
ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

In a multicenter study of patients with chronic or frequently recurrent urinary tract infections

Bactrim was 27.2%* more effective than ampicillin in keeping patients infection-free for 8 weeks.†



Bactrim–70.5% of 78 patients infection-free at 8 weeks.



ampicillin–55.4% of 74 patients infection-free at 8 weeks.

*This percentage is arrived at by the statistical method of dividing the difference between Bactrim and ampicillin results (15.1%) by the percent of ampicillin results (55.4%).

†Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole)

Double Strength tablets Just 1 tablet B.I.D.

Note: Bactrim tablets were used in these clinical trials. Bioequivalency studies show one Bactrim DS double strength tablet is equivalent to two Bactrim tablets.

Please see summary of product information on preceding page.

ROCHE

Texas Medicine
VOL 73 MARCH 1977

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION
Don G. Harrel, MD, Dallas
Chairman
Sam N. Key, MD, Austin
Vice-Chairman
Walter A. Brooks, MD, Quanah
Secretary
R. Harvey Bell, MD, Palestine
C. W. Yates, MD, Rosenberg
Paul R. Meyer, MD, Port Arthur
Joe T. Nelson, MD, Weatherford

TMA OFFICERS
L. S. Thompson, MD, Dallas
President
Sheridan S. Evans, MD, McAllen
Vice-President
John M. Smith, Jr., MD, San Antonio
President-Elect
James G. Morris, MD, Lubbock
Secretary
Ben R. Keller, Jr., MD, Arlington
Treasurer
C. Lincoln Williston, Austin
Executive Director

EDITORIAL STAFF
1905 N Lamar Blvd, Austin 78705
Telephone: 512-477-6704
Marilyn Baker, Managing Editor
Rae Vajgert, Assistant Managing Editor
Elise David, Assistant Editor
Donna Billie, Editorial Assistant
Patty Mullins, Secretary

ADVERTISING STAFF
1801 N Lamar Blvd, Austin 78701
Jon R. Hornaday, Advertising Director
Anne Sheinutt, Advertising Manager

SCIENTIFIC PUBLICATION COMMITTEE
Joseph M. Abell, Jr., MD, Austin
Chairman
Robert Askew, MD, Austin
Vice-Chairman
Ronald P. Boren, MD, Austin
Ernest C. Butler, MD, Austin
Jesse D. Cone, MD, Odessa
C. W. Daeschner, MD, Galveston
George A. Gates, MD, San Antonio
Tracy R. Gordy, MD, Austin
R. Maurice Hood, MD, Austin
Paxton H. Howard, Jr., MD, Temple
Joseph Lancaster, MD, Austin
Francis E. McIntyre, MD, Austin
Paul C. Peters, MD, Dallas
Richard S. Ruiz, MD, Houston
H. Irving Schweppe, Jr., MD, Houston
Theodore P. Votteler, MD, Dallas

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS
1801 N Lamar Blvd, Austin 78701
c/o Ray Riggs, Business Manager
$4 per year for members; $8 for non-members; $14 for foreign; $6 for libraries, hospitals, and universities; $4 for medical students. Single copy: $1.25.

CHANGE OF ADDRESS
1801 N Lamar Blvd, Austin 78701
c/o Edward R. Bierschenk, Membership Director

Copyright 1977 by the Texas Medical Association. Owned and issued monthly by the Association.

Second Class Postage paid at Fort Worth, Texas, under act of March 3, 1879.

Contents

Scientific Articles

47 Nursing bottle syndrome
Richard L. Trippie, DDS; Richard E. Jennings, DDS

52 The physician's role in reducing patient exposure to sucrose
Ira L. Shannon, DMD, MSD; Eleanor J. Edmonds, BS

59 Bacteremia in a metropolitan teaching hospital
S. M. Hussain Qadri, PhD; L. J. Evans, BS; R. D. Wende, DrPH; R. P. Williams, PhD

67 Gas in the portal vein of adults with necrotizing enteropathy
Peter J. Naus, MD; Hidenori Kawanishi, MD; Gil S. Borlaza, MD

Editorials

125 Fact, not fiction: medicine's basis for rational decisions

126 Compare insurance policies to evaluate sales claims
Charles W. Castle, MD

Feature

77 Results of the 1976 TMA professional liability insurance survey

News

7 Several hundred physicians attend legislative hearings on SB 103 and HB 370

10 Medical practice survey shows dramatic expenses increase

13 Dr John M. Smith testifies at Texas Medicaid hearings

13 House committee approves bill creating more family practice residencies

14 Variety of health related bills face the 65th Texas Legislature

14 Coordinating Board will meet March 8 in Austin

Departments

25 Capital Comments

28 Continuing Education

42 Meetings

74 Information for Authors

83 Medicine and the Law

86 Medical Newsmakers

92 Medicine and Literature

95 Deaths

123 Letters

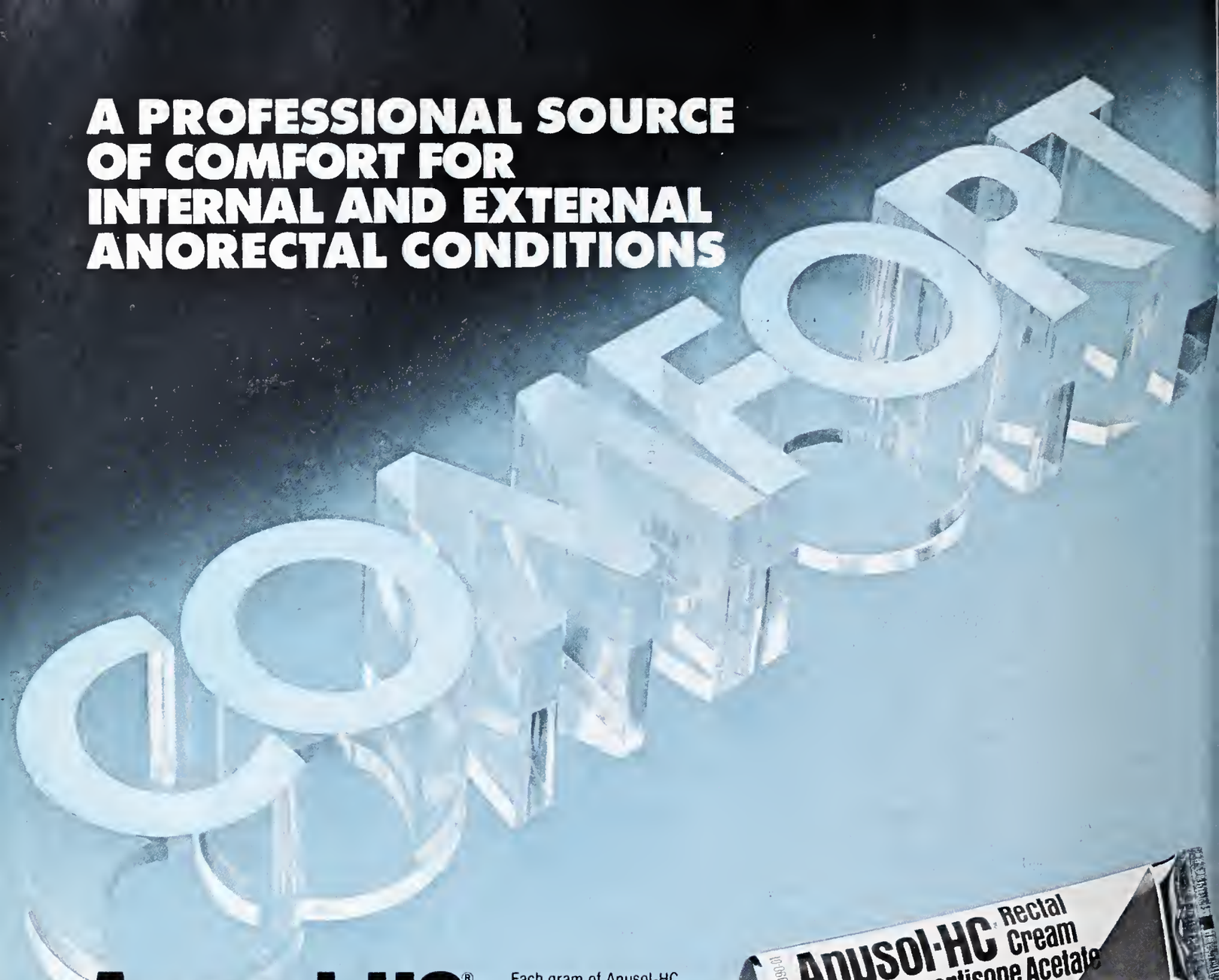
On The Cover

The decayed upper front teeth are found in children with nursing bottle syndrome, a condition that dentists usually don't see until the damage is done. Physicians, however, have an opportunity to teach parents about proper infant feeding. Likewise, physicians can help patients avoid unnecessary exposure to sucrose by being aware of the contents of infant foods and over-the-counter medications. See articles on pages 47 and 52.

Next Month

In April there will be several articles on allergic disorders, one on Rocky Mountain spotted fever, and one on how to increase the number of family physicians in Texas.

A PROFESSIONAL SOURCE OF COMFORT FOR INTERNAL AND EXTERNAL ANORECTAL CONDITIONS



Anusol-HC®

suppositories and cream with hydrocortisone acetate. Rx only

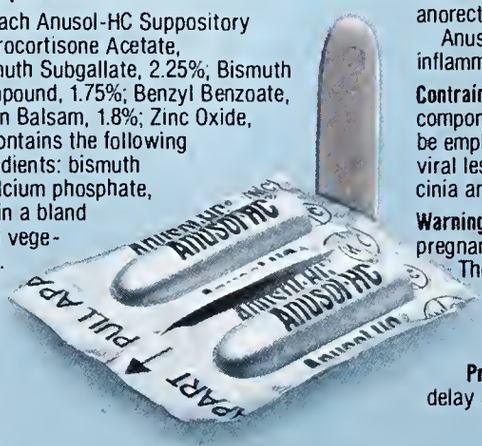
pain and burning respond in minutes

ANUSOL-HC® SUPPOSITORIES
Rectal Suppositories with Hydrocortisone Acetate

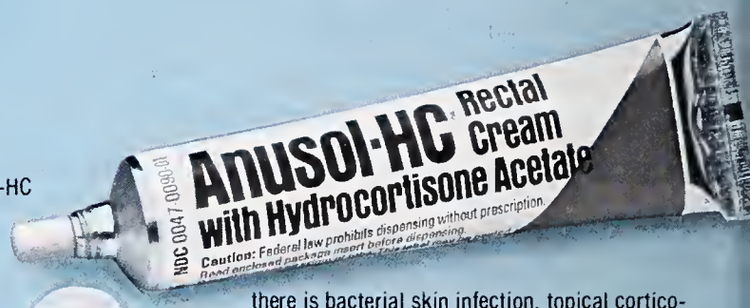
ANUSOL-HC® CREAM
Rectal Cream with Hydrocortisone Acetate

CAUTION: Federal law prohibits dispensing without prescription.

Description: Each Anusol-HC Suppository contains Hydrocortisone Acetate, 10.0 mg; Bismuth Subgallate, 2.25%, Bismuth Resorcin Compound, 1.75%; Benzyl Benzoate, 1.2%; Peruvian Balsam, 1.8%; Zinc Oxide, 11.0%; also contains the following inactive ingredients: bismuth subiodide, calcium phosphate, and coloring in a bland hydrogenated vegetable oil base.



Each gram of Anusol-HC Cream contains Hydrocortisone Acetate, 5.0 mg; Bismuth Subgallate, 22.5 mg; Bismuth Resorcin Compound, 17.5 mg; Benzyl Benzoate, 12.0 mg; Peruvian Balsam, 18.0 mg; Zinc Oxide, 110.0 mg; also contains the following inactive ingredients: propylene glycol, bismuth subiodide, propylparaben, methylparaben, polysorbate 60, sorbitan monostearate in a water-miscible base of mineral oil and glyceryl monostearate. Nonstaining.



Indications: Anusol-HC is adjunctive therapy for the symptomatic relief of pain and discomfort in: external and internal hemorrhoids, proctitis, papillitis, cryptitis, anal fissures, incomplete fistulas, and relief of local pain following anorectal surgery.

Anusol-HC is especially indicated when inflammation is present.

Contraindications: History of sensitivity to any component. Topical corticosteroids should not be employed in tuberculous, fungal and most viral lesions of the skin (including herpes, vaccinia and varicella).

Warning: The safe use of topical steroids during pregnancy has not been fully established. Therefore, during pregnancy they should not be used unnecessarily on extensive areas, in large amounts or for prolonged periods of time.

Precautions: Symptomatic relief should not delay definitive diagnoses or treatment. When there is bacterial skin infection, topical corticosteroids should be used only with appropriate concomitant antimicrobial therapy. Prolonged or excessive use of corticosteroids might produce systemic effects.

Dosage and Administration: Anusol-HC Suppositories: Remove foil wrapper and insert suppository into the anus. One suppository in the morning and at bedtime, for 3 to 6 days or until inflammation subsides. Then maintain patient comfort with regular Anusol.

Anusol-HC Cream: Adults—After gentle bathing and drying of the area, remove tube cap and apply to the exterior surface and gently rub in. For internal use, attach the plastic applicator and insert into the anus by applying gentle continuous pressure. Then squeeze the tube to deliver medication. Cream should be applied 3 or 4 times a day for 3 to 6 days until inflammation subsides.

Supplied: Suppositories—boxes of 12 (N 0047-0089-12); in silver foil strips with Anusol-HC printed in black.

Cream—one-ounce tube (N 0047-0090-01) with plastic applicator; detachable label.

Store Between 59° and 86°F (15° and 30°C).

Full information is available on request.

Warner/Chilcott
Division,
Warner-Lambert Company
Morris Plains, N.J. 07950

AN-GP-71 2/C

Brief Summary of Prescribing Information

Actions: Pyrvinium pamoate appears to exert its anthelmintic effect by preventing the parasite from using exogenous carbohydrates. The parasite's endogenous reserves are depleted, and it dies. Povan is not appreciably absorbed from the gastrointestinal tract.

Indication: Povan is indicated for the treatment of enterobiasis.

Warnings: No animal or human reproduction studies have been performed. Therefore, the use of this drug during pregnancy requires that the potential benefits be weighed against its possible hazards to the mother and fetus.

Precautions: To forestall undue concern and help avoid accidental staining, patients and parents should be advised of the staining properties of Povan. Care should be exercised not to spill the suspension because it will stain most materials. Tablets should be swallowed whole to avoid staining of teeth. Parents and patients should be informed that pyrvinium pamoate will color the stool a bright red. This is not harmful to the patient. If emesis occurs, the vomitus will probably be colored red and will stain most materials.

Adverse Reactions: Nausea, vomiting, cramping, diarrhea, and hypersensitivity reactions (photosensitization and other allergic reactions) have been reported. The gastrointestinal reactions occur more often in older children and adults who have received large doses. Emesis is more frequently seen with Povan Suspension than with Povan Filmseals.

How Supplied: Each Povan Filmseal® contains pyrvinium pamoate equivalent to 50 mg pyrvinium, supplied in bottles of 50 (NDC 0710-0747-50; NSN 6505-00-134-1966). Povan Suspension, a pleasant-tasting, strawberry-flavored preparation containing pyrvinium pamoate equivalent to 10 mg pyrvinium per milliliter, is supplied in 2-oz bottles (NDC 0071-1254-31; NSN 6505-00-890-1093).

RC/RD PD-JA 1699-2-P (8-76)

Parke, Davis & Company
Detroit, Michigan 48232

When it's pinworms, treat the family

Povan® (pyrvinium pamoate)

- over 17 years of proved clinical effectiveness and safety
- no measurable absorption from the GI tract—minimal systemic side effects
- one dose—one time—that's all that's usually required
- two dosage forms: Tablets and Suspension—suitable for the entire family

Povan—there's a form for every member of the family.

PARKE-DAVIS

News in brief

Professional liability insurance

Several hundred physicians filled the House and Senate chambers Feb 9 as Texas Senate and House Committees held public hearings considering companion bills SB 103 and HB 370, the Medical Liability and Insurance Improvement Act. TMA representatives told committee members, "Nationwide billions of dollars are being paid solely to finance our malpractice insurance system." . . . 7

Medical practice survey

A new survey of more than 2,000 Texas physicians conducted by TMA in 1976 shows that Texas physicians are not particularly satisfied with the Medicaid program, and medical practice expenses have increased dramatically between 1970 and 1975 . . . 10

Medicaid hearings

Low Medicaid payments to physicians are helping keep doctors out of rural and inner city areas, John M. Smith, Jr, MD, TMA president-elect, testified before a state task force studying Medicaid. Eighty percent of doctors will take Medicaid cases, although more than half would like to have fewer Medicaid patients, he said . . . 13

Texas legislation

Health-related issues facing the 65th Session of the Texas Legislature range from emergency medical services to new medical schools . . . 14

News in detail

Several hundred physicians attend legislative hearings on SB 103 and HB 370

Several hundred physicians filled the House and Senate chambers Feb 9 as Texas Senate and House Committees held public hearings considering companion bills SB 103 and HB 370, the Medical Liability and Insurance Improvement Act.

TMA supports both SB 103, introduced by Sen Ray Farabee, Wichita Falls, and HB 370, introduced by Rep Pike Powers, Beaumont.

Neither the House nor Senate committee took action on the proposals Feb 9, and both committees will hear more testimony in future hearings.

The Senate Jurisprudence Committee headed by Sen Babe Schwartz, Galveston, heard two hours of testimony in support of SB 103. The House Committee, headed by Rep Tom Uher, Bay City, heard several hours of testimony both for and against HB 370.

Those testifying before both committees representing TMA included Joseph T. Ainsworth, MD, chairman of the TMA Council on Medical Legislation, and Ace Pickens and Jack Maroney, members of the TMA legal counsel.

Also supporting parts of HB 370 during the House hearings were representatives of the Texas Hospital Association and the Texas Association of Defense Counsel. Testifying against the proposed legislation during the House and Senate hearings were representatives of the Texas Trial Lawyers Association.

Dr Ainsworth testified about the importance of improvement of medical science through peer review, educational training, and professional practice. "The TMA has always attempted to stay abreast of ways to improve our profession," he said.

"The sections of SB 103 and HB 370 that deal with physician competency are an attempt to provide adequate protection, consistent with due process, to those with legitimate information to furnish others who have a need to know such information with respect to disciplinary matters of physician competency.

"Medical societies, medical staffs and hospital boards, as well as the State Board of Medical Examiners, could then perform their duties and responsibility better in the interest of the public. These provisions will also strengthen the existing methods to assure the delivery of continued competent medical care to the citizens of the state of Texas," Dr. Ainsworth said.

Sections of SB 103 and HB 370 allow professional societies of physicians that take certain formal disciplinary actions against a member relating to professional ethics, medical incompetency, moral turpitude or drug or alcohol abuse to report the action to the Board of Medical examiners, he said.

The section allows physicians affected to review reports submitted to the State Board of Medical Examiners regarding their alleged incompetency, he said.

Any person providing information to a medical peer review committee and any member or employee of such committee is immune from civil liability, he said.

Under the proposed legislation, the State Board of Medical Examiners is given additional power to deny a license to practice medicine, and to discipline licensed physicians for various reasons including failure to practice medicine in an acceptable manner or having had certain disciplinary actions taken against them by a professional medical association or licensed hospital, Dr Ainsworth said.

The proposed legislation also contains a provision that the State Board of Medical Examiners may temporarily suspend the license of a physician without notice or hearing provided the physician's practice constitutes an immediate danger to the public, Dr Ainsworth said.

Pickens told members of both committees that there still remains a serious problem relating to availability of adequate insurance in Texas today.

The medical malpractice crisis is having an adverse effect upon the rising cost of health care, Pickens said. Due to the cost of insurance, doctors fees have increased an average of 9% in 1974, 11% in 1975, and 10% in 1976 with some specialties as high as 16% in one year, he said.

"Nationwide, billions of dollars are being paid solely to finance our malpractice insurance system," Pickens said.

Because of the threat or fear of a lawsuit, more physicians are ordering more lab tests, ordering more x-rays, using more consultants, and hospitalizing more patients, Pickens said.

"Because of this crisis physicians are, to some extent, having their medical practice dictated by insurance considerations. Some who formerly provided a full range of medical services have reduced the scope of their practice to obtain, retain or afford their malpractice insurance premiums," he said.

The recommendations in the proposed legislation will decrease the cost to the insurance system, improve the efficiency of the legal system, assure that awards are rationally connected to actual damages, and do so without restricting the claimant's right any more than necessary to deal with the crisis, Pickens said.

Passage of companion bills SB 103 and HB 370 would . . . .

- **Allow filing of cases without specific dollar amounts of alleged damages, to eliminate unnecessary sensational publicity;**
- **Set up a procedure for the screening of health care liability claims by a Health Care Screening Panel;**
- **Tighten the statute of limitation, so that claims must be made within one year from the date the claimant knew or should have known of the claim, or three years from the time of the alleged incident, whichever time occurs first;**
- **Allow judges to structure awards to permit periodic payments to claimants, rather than a single lump sum;**
- **Implement a sliding scale for attorney's fees;**
- **Permit countersuits against claimants and attorneys for bringing suits in bad faith;**
- **Create a Texas Medical Disclosure Panel to determine which risks and hazards for treatments and procedures should be communicated in advance to patients;**
- **Strengthen disciplinary powers of the Texas State Board of Medical Examiners, and provide for district review committees to assist that Board.**

TEXAS MEDICAL ASSOCIATION

INSURANCE PROGRAM

- DISABILITY INCOME
- OFFICE OVERHEAD
- MAJOR MEDICAL
- PERSONAL ACCIDENT
- LIFE INSURANCE

administered by

TEXAS MEDICAL ASSOCIATION INSURANCE TRUST

1901 N. Lamar Blvd., Austin, TX 78705, (512) 476-6551

Prudential
Group Insurance

Medical practice survey shows dramatic expenses increase

Texas physicians are not particularly satisfied with the Medicaid program, and medical practice expenses have increased dramatically between 1974 and 1975, according to results of the 1976 Texas Medical Association Survey of Physician's Medical Practice.

The survey questionnaire was mailed to a random sample of 2,423 members of TMA in direct patient care. Data presented is representative of the actual data for the physician population of Texas.

Physicians seem fairly content with Medicare (relative to Medicaid). Fifty percent want their Medicare percentage to stay the same. Fifty-seven percent of all physicians accepting Medicaid would like to see the percentage of their patients with this type of coverage decrease.

Forty-four percent of all physicians take as-

How Physicians Who Accept Medicare and Medicaid Patients Would Like to See the Percentages of Their Patients With These Coverages Change in the Future

	MEDICARE			MEDICAID		
	Increase	Decrease	Remain Same	Increase	Decrease	Remain Same
Family Practice	8%	46%	46%	6%	68%	26%
Pediatrics	--	--	--	12	38	50
Internal Medicine	4	39	57	4	59	37
General Surgery	12	37	50	8	52	40
Obstetrics/Gynecology	13	35	52	13	55	32
Ophthalmology	13	29	58	9	56	35
Orthopedic Surgery	8	40	53	9	55	36
Urology	26	13	61	14	51	35
Other Surgical*	14	41	45	8	58	34
Anesthesiology	13	53	34	11	69	20
Psychiatry	14	36	50	13	44	44
Radiology	15	48	38	9	64	27
Other Specialties•	15	28	57	13	47	41
All Physicians	11%	39%	50%	8%	57%	34%

Source: Texas Medical Association 1976 Survey of Physician's Medical Practice

*Other Surgical includes neurosurgeons, otolaryngologists, plastic surgeons, colon and rectal surgeons, thoracic surgeons and EENTs

•Other Specialties include aerospace medicine, pathology, neurology, occupational medicine, general preventive medicine, physical medicine and rehabilitation, public health, allergy, dermatology and pediatric allergy.

signments on Medicare less than 50% of the time and 30% never take them. Seventy-four percent regularly bill for more than Medicare pays.

Eighty-seven percent of all physicians accept Medicare patients, while 80% of all physicians accept Medicaid patients.

Expenses for all physicians increased 16% between 1974 and 1975.

Reasons for the increase include inflation affecting employees' wages; professional liability insurance premiums; and increasing rent, utilities, and other office costs.

A family physician pays an average of $1,093 per week just to keep the office operating.

In other areas, the survey shows that family practitioners work an average of 58 hours per week and work 49 weeks per year.

HOURS WORKED PER WEEK AND WEEKS WORKED PER YEAR

	Hours/Week	Weeks/Year
Family Practice	59	49
Pediatrics	59	48
Internal Medicine	59	49
General Surgery	62	49
Obstetrics/Gynecology	63	49
Ophthalmology	51	47
Orthopedic Surgery	61	48
Urology	59	48
Other Surgical*	59	48
Anesthesiology	54	48
Psychiatry	54	49
Radiology	50	49
Other Specialties•	52	48
All Physicians	58	48

Source: Texas Medical Association 1976 Survey of Physician's Medical Practice

*Other Surgical includes neurosurgeons, otolaryngologists, plastic surgeons, colon and rectal surgeons, thoracic surgeons and EENTs

•Other Specialties include aerospace medicine, pathology, neurology, occupational medicine, general preventive medicine, physical medicine and rehabilitation, public health, allergy, dermatology and pediatric allergy.

The Borden Touch.

It's inside every carton of Borden milk and ice cream: freshness, flavor and old-fashioned value wrapped up together in one famous name. If it's Borden, it's got to be good . . . we guarantee it!

BORDEN

© BORDEN INC

Dr John M. Smith testifies at Texas Medicaid hearings

Low Medicaid payments to physicians are helping keep doctors out of rural and inner city areas, John M. Smith, Jr, MD, TMA president-elect, testified before a state task force studying Medicaid Feb 2 in San Antonio.

The payments have not kept pace with inflation and are restricted by law in rural areas, Dr Smith said.

The San Antonio physician testifed before a subcommittee of the Texas Department of Public Welfare task force on Medicaid.

When a doctor treats mostly Medicaid patients, then it can be hard to make the money to cover soaring malpractice insurance and other expenses, Dr Smith said. Malpractice insurance rates have risen more than 600 percent since 1970 for some specialists, he said.

Several doctors have left South Texas because of Medicaid payment problems, after they found that Medicaid payments were too low and the Medicaid patient load was too big for them to offset the income loss, Dr Smith said.

More than half of all Texas Medicaid patients are in the Greater South Texas Cultural Basin.

Eighty percent of doctors will take Medicaid cases, although more than half would like to have fewer Medicaid patients, a recent TMA statewide survey shows.

Six subcommittees of the task force have been named to study nursing homes and in-home care; physician services; hospital, laboratory and x-ray services; pharmacy service; special medical services such as health screenings for children, transportation, adult dentures, eyeglasses and hearing aids; and recipient views.

During January and February Medicaid hearings were heard in Austin, Corpus Christi, Dallas, Beaumont, Houston, San Antonio, Amarillo, Lubbock, El Paso, Abilene, Arlington, Waco, Paris, Edinburg, San Antonio, Nacogdoches, Houston, and Odessa.

The subcommittees met jointly in Austin Feb 15 and 16, and will meet again March 1 and 2 in Fort Worth and March 15 in Houston.

The task force will meet March 30 with the Texas Department of Welfare Board in Austin and make recommendations after a joint hearing.

House committee approves bill creating more family practice residencies

The House Higher Education Committee unanimously approved HB 282 which creates more family practice residencies, after a hearing Feb 9.

HB 282, introduced by Rep Lyndon Olson Jr, Waco, gives the Coordinating Board, Texas College and University System the power to contract with the medical schools, licensed hospitals, and non-profit corporations to provide state funds for family practice residency training programs.

The bill was supported by the Texas Medical Association and the Texas Academy of Family Physicians.

The committee added a purpose clause to the legislation. The purpose, the legislation states, is to encourage "the permanent location in underserved areas of family physicians trained in these programs in order to better serve the medical needs of the citizens of Texas."

William F. Ross, MD, chairman of the TMA Council on Medical Education and Hospitals, testified at the hearings in support of the legislation. However, Dr Ross said that not just family practice residencies but primary care residencies must be expanded in Texas.

"We now face a shortage of primary care physicians in Texas," Dr Ross told the committee. "The shortage of primary care physicians, especially family physicians and general internists, will become worse since the number of residency programs is not adequate to meet the deficit and to replace those physicians who will leave practice due to age and other factors."

By providing full state funding for primary care residency programs, Texans would have available physicians who have received training in quality programs, have significant numbers of physicians in the least amount of time, and have the most needed types of physicians available, Dr Ross said.

Variety of health-related bills face the 65th Texas Legislature

During the 65th Session of the Texas Legislature medical legislation ranging from drug substitution to emergency medical care will be considered.

Bills of primary concern to members of the Texas Medical Association are Senate Bill (SB) 103 introduced by Sen Ray Farabee, Wichita Falls, and House Bill (HB) 370 introduced by Rep Pike Powers, Beaumont. The bills, called the Medical Liability and Insurance Improvement Act, offer solutions for the professional liability insurance crisis in Texas, and have been endorsed by the Texas Medical Association.

In other areas, several bills have been established to create new medical schools in Texas. Rep Samuel W. Hudson, Dallas, has filed HB 302 that establishes a school of medicine at Prairie View A&M University. Rep Fred Head, Athens, has introduced HB 5 that would create the University of Texas medical school at Tyler. Rep Doyle Willis, Fort Worth, introduced HB 44 that would create a medical school for Texas Woman's University.

Also in medical education, Rep Lyndon Olson, Jr, Waco has introduced HB 282, that would give authority to the Coordinating Board, Texas College and University System to contract with medical schools, licensed hospitals, and nonprofit corporations for the purpose of providing state funds to expand family practice residency training programs.

Sen Chet Brooks, Pasadena, has introduced SB 60 that grants authority to the Coordinating Board, Texas College and University System to contract with teaching hospitals with compensation for costs of providing teaching services.

Bills have also been introduced that will attempt to license and regulate corrective therapies, clinical laboratory personnel, physical therapists, marriage and family counselors, social workers, speech pathologists, audiologists, and others. Rep Dan Kubiak, Rockdale, has introduced HB 281 that would license and regulate the practice of clinical counseling or therapy.

In the area of eye care, Rep Mickey Leland, Houston, has introduced HB 21 that would allow the use of pharmaceutical agents by optometrists. The bill has the support of the Texas Optometric Association.

Rep Herman Lauhoff, Houston, has filed HB 299, the Texas Emergency Medical Services Act, that would establish regulation of ambulances and ambulance service personnel by the State Department of Health Resources.

Several bills have been introduced providing for the permissible substitution of biologically equivalent generic drugs. Rep Leland has introduced HB 10 which would allow prescription drug product selections by pharmacists. SB 63, introduced by Sen Chet Brooks, Pasadena, creates a State Formulary Commission allowing prescription drug product selections by pharmacists.

Rep Anthony Hall, Houston, filed HB 181 which creates a Texas Medicaid plan that would grant public hospitals the right to reimbursement from the state of Texas for the cost of hospitalization given to indigents.

Coordinating Board will meet March 8 in Austin

The Coordinating Board, Texas College and University System will meet in a specially called meeting at 10 am March 8 at the Joe C. Thompson Center in Austin.

Included in the agenda is consideration of a request from Texas Woman's University for a school of medicine.

Neck x-ray suit dismissed by Illinois Judge

An Illinois Circuit Court Judge has dismissed the first of about 40 malpractice suits filed against a Chicago hospital by patients who received neck x-ray therapy there 15 to 35 years ago, according to *American Medical News*.

The suit against Michael Reese Hospital was dismissed by Judge David Canel, who said the treatments, subsequently found to increase the risk of thyroid cancer, were "standard procedure" in the 1940s and 1950s for treating severe acne and chronic tonsil and adenoid inflammations.

In 1973, after researchers reported an increased incidence of thyroid cancer among people who had received the irradiation therapy, the hospital began efforts to locate 5,000 former patients, inform them of the risk, and urge them to have thyroid examinations. The procedure had been followed by many other hospitals.

Judge Canel said that the patient had failed to prove negligence, and had exceeded the state's statute of limitation for more than two years.

Hospital officials said they have contacted about 3,000 of the 5,000 patients, and 1600 have been examined for thyroid cancer. About eight of every 100 of the patients have developed thyroid cancer, the hospital indicated.

In January 1977 CBS-TV broadcasted a report dealing with those persons who received radiation treatments in the 1940s and 1950s and who later developed thyroid disorders on the program "60 Minutes."

The American Hospital Association and the American Medical Association began efforts in 1975 to encourage members to look at the situation in their communities with respect to the incidence of cancer of the thyroid as a possible consequence of the use of radiation.

Thyroid carcinoma is usually a very slow growing cancer that poses little immediate danger to life.

Medicare carriers will survey physicians employing physicians assistants

The Bureau of Health Insurance of the Department of Health, Education, and Welfare has asked Medicare carriers to conduct a special survey of physicians employing physicians assistants (medex, nurse practitioners, physician extenders, etc.).

The purpose of the survey is to make certain that claims filed involving physician assistant services are correctly processed.

At the present time, the Medicare law does not contain a provision for the payment of services rendered by a physician assistant if those services (for example, hospital visits) are traditionally rendered by the physician.

The only services rendered by a physician assistant that can be recognized under Part B of Medicare are those that are "incident to" a physician's professional service. These are services ordinarily performed by the physician's nurse or other office assistants, under the physician's direct supervision. Examples include the taking of blood pressure and temperature, injections, changing dressings, and collecting laboratory samples.

Federal funding halted at Arkansas hospital

Federal Medicare, Medicaid and child health benefits at Newport Hospital, Newport, Ark, have been halted because of an alleged conspiracy to defraud the federal Medicare program.

The March 3, 1977, termination culminates a three year investigation of the hospital by federal officials, according to Jerry D. Sconce, regional Medicare director in Dallas.

The decision to stop federal payments was based on the hospital's 1975 conviction on two counts of conspiracy to defraud the Medicare program.

The conspiracy case stemmed from false Medicare claims and false Medicare cost reports filed by the hospital.

False claims were made by the hospital padding Medicare claims to show days of hospitalization for patients already discharged. Medicare cost reports were falsified by the hospital claiming the personal expenses of hospital owners as hospital expenses.

The termination of federal payments was invoked under the authority granted by the 1972 Social Security amendments.

Health department makes changes in surveillance reporting

The Texas Department of Health Resources has announced changes in the reporting system for "Texas Morbidity This Week," a weekly report on Texas diseases.

The department will ask for only those surveillance reports necessary for control of specific outbreaks, or for deriving data for small, carefully designed samples of the more common diseases.

The previous policy of requesting surveillance reports on every case is terminated for all diseases except typhoid fever.

The weekly morbidity report will be continued with a change of format later in 1977. Interpretation of its data will also be changed as soon as the new methods and definitions are worked out.

There will be a quarterly analytic report, "Texas Morbidity This Quarter," based on the weekly tallies and other data.

Occasional special publications will report epidemiologic statistical data on specific problems in disease control.

A manual for physicians and other health professionals will be published to promote uniformity of standards of reporting throughout Texas, similar to the U.S. Public Health Service manual, "Physicians' Handbook on Medical Certification: Death, Fetal Death, Birth."

Anyone involved in Texas morbidity reporting should write questions, comments or suggestions to the Division of Epidemiology, Bureau of Communicable Disease Services, Texas Department of Health Resources, Austin, Texas 78756, or phone 512-458-7207.

Boeing will design medical care system for astronauts

The Boeing Company's Space Systems Division at Houston will design a system to provide rapid medical care for the astronauts on space missions.

Under funding by the NASA-Johnson Space Center, Boeing will prepare a medical support plan and a medical operations plan for Space Shuttle flights and develop a design concept for a rapid-access medical consultation system.

The work is an eight-month extension of a previous Johnson Center contract, which involved the use of space technology to provide advanced health care for people living in remote regions.

Texas health department is studying Guillain-Barre syndrome

After the National Influenza Immunization Program was halted in December 1976, the Texas Department of Health Resources began a special study to explore the problem of the Guillain-Barre syndrome.

The immunization program was halted because of the suspected association with the Guillain-Barre syndrome.

However, Feb 8, 1977, HEW secretary Joseph Califano announced that bivalent vaccinations should be resumed for high-risk individuals.

New informed consent forms for patients taking the bivalent A/Victoria A/New Jersey immunization are available from local or regional health departments or the Texas Department of Health Resources.

The new informed consent forms must be signed for a physician to be covered under the national federal protection program. The new form mentions the Guillain-Barre syndrome.

When completed the study by the Texas Department of Health Resources will provide an estimate of the incidence rate of the conditions in Texas.

The study was coordinated with the Texas Medical Association and the Texas Neurological Society.

The Texas Department of Health Resources contacted 543 physicians by Mailgram. Half this sample were TMA members in a neurologic specialty and the remainder was a random sample of physicians in all other specialties involved in direct patient care.

For purposes of the study, Gullain-Barre syndrome was defined as a paralysis of the extremities, which is rapidly progressive, ascending and bilaterally symmetrical; whether or not there is any sensory impairment. Physicians

BREATHING WITH COMFORT.

Choledyl—a highly soluble, true salt of theophylline—rapidly relaxes bronchospasm to promote easier breathing. And, gastric discomfort is minimal.

Because Choledyl is more stable...more rapidly absorbed from the G.I. tract than aminophylline.

Available in both tablets and elixir for patients with obstructive lung disease.

Choledyl® (oxtriphylline) Tablets and Elixir CAUTION: Federal law prohibits dispensing without prescription. Each partially enteric coated tablet contains 200 mg or 100 mg oxtriphylline. Each teaspoonful of the elixir contains 100 mg oxtriphylline; alcohol 20%. *Indications.* Choledyl (oxtriphylline) is indicated for relief of acute bronchial asthma and for reversible bronchospasm associated with chronic bronchitis and emphysema. *Warning.* Use in pregnancy—animal studies revealed no evidence of teratogenic potential. Safety in human pregnancy has not been established; use during lactation or in patients who are or who may become pregnant requires that the potential benefits of the drug be weighed against its possible hazards to the mother and child. *Precautions.* Concurrent use of other xanthine-containing preparations may lead to adverse reactions, particularly CNS stimulation in children. *Adverse Reactions.* Gastric distress and, occasionally, palpitation and CNS stimulation have been reported. *Dosage.* Average adult dosage: Tablets—200 mg, 4 times a day; Elixir—two teaspoonfuls, 4 times a day. *Supplied.* 200 mg yellow, partially enteric coated tablets in bottles of 100 (N 0047-0211-51) and 1000 (N 0047-0211-60); Unit Dose—200 mg tablets (N 0047-0211-11); 100 mg red, partially enteric coated tablets in bottles of 100 (N 0047-0210-51). Elixir—bottles of 16 fl oz (1 pint) 474 ml (N 0047-0215-16). *Toxicity.* Oxtriphylline, aminophylline and caffeine appear to be more toxic to newborn than to adult rats. No teratogenic effects have been seen. Full information is available on request.

CH-GP-51-4/C

WARNER/CHILCOTT
Division, Warner-Lambert Company
Morris Plains, N.J. 07950

CHOLEDYL®
(OXTRIPHYLLINE)

SINGLE-ENTITY
BRONCHODILATION
MINIMAL GASTRIC DISCOMFORT

When Big Ben looks "a little off"...

Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

▪ **Most Widely Prescribed**—Antivert is the most widely prescribed agent for the management of vertigo* associated with diseases affecting the vestibular system such as Menière's disease, labyrinthitis, and vestibular neuronitis.

▪ **Relief of Nausea and Vomiting**—Antivert/25 can relieve the nausea and vomiting often associated with vertigo.*

▪ **Dosage for Vertigo***—The usual adult dosage for Antivert/25 is one tablet t.i.d.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York New York 10017

were to report only cases that began after Aug 1, 1976.

In January, more than 100 reports of suspected cases had been received. Consultation with physicians and review of hospital records have confirmed the diagnosis of Guillain-Barre syndrome in about half those cases.

The Texas data appears consistent with those from other states. It appears the frequency of the syndrome may be about five to ten times higher in persons who received swine flu immunization, compared to unvaccinated persons.

Baylor medical school forms partnership with Woman's Hospital of Texas

Baylor College of Medicine and The Woman's Hospital of Texas in Houston have formed a partnership aimed at expanding teaching and improving care in obstetrics and gynecology.

The affiliation was announced by Jack Moore, MD, Woman's Hospital of Texas president, and Michael E. DeBakey, MD, Baylor president.

The four-story, 102,000 square-foot hospital opened in June, 1976. The hospital provides services in many subspecialties of the two basic disciplines of obstetrics and gynecology, including perinatology, oncology and endocrine-infertility, female urology and plastic surgery.

National Endowment for Humanities announces humanities seminars for physicians

The National Endowment for the Humanities announces four one-month humanities seminars for physicians and other members of the health professions to be held in the summer and fall of 1977.

Members of the medical profession will be brought together with distinguished humanists from the fields of philosophy and religion for the month of full-time study which will be devoted to issues including ethical conflicts, the rights of patients and practitioners, and health delivery.

Up to 15 participants will attend each seminar tuition free and will receive a $1,200 stipend to cover expenses, plus reimbursement for travel up to a $300 maximum.

The application deadline for five seminars is April 15 with selections to be announced about April 25. The application deadline for one seminar is May 31 with selections to be announced about June 8.

Further information, including a leaflet describing the seminars in greater detail and applications forms, may be obtained from Professor H. Tristram Engelhardt, Jr., Institute for the Medical Humanities, University of Texas Medical Branch, Galveston, Texas 77550.

Doctor Fee Increase
Consumer Price Testimony

	All Items	All Services	MD Fees	Total Medical Care
1967	100.0	100.0	100.0	100.0
1970	116.3	121.6	121.4	120.6
1976 (Sept.)	172.6	183.2	192.2	187.9

(Source: Social Security Bulletin)

Charles Gregory, MD, Library Fund established by the University of Dallas

The Charles F. Gregory, MD, Memorial Library Fund has been established by the University of Dallas to honor Dr Gregory.

Members of the medical community, friends, and former patients are being asked to support generously an effort to increase the library collection by 30,000 volumes and microfilms.

The funds donated will be used to purchase library books and resource material for students in the science and pre-medical related areas.

Checks may be made payable to the University of Dallas—Charles F. Gregory, MD, Memorial Library Fund. The donation is tax deductible. Checks should be mailed to the University of Dallas, Charles F. Gregory, MD, Memorial Library Fund, Irving, Texas 75601.

New poison center opened in Houston

The Southeast Texas Poison Center is opened in the Texas Medical Center in Houston.

The new Poison Center is a cooperative service of The University of Texas Medical Branch (UTMB) in Galveston, The University of Texas Medical School at Houston, and Hermann Hospital.

The Southeast Texas Poison Center represents a reorganization and expansion of the former UTMB Poison Center in Galveston. The Houston center is located in the Emergency Center of Hermann Hospital.

In the event of a poisoning accident, parents and physicians can reach the Southeast Texas Poison Center by calling the Houston telephone number 713-654-1701, twenty-four hours a day. This call will put them in contact with a trained staff of pharmacists and physicians who can assist them with their poisoning problem.

If treatment is necessary, the patient will be directed to his physician or to an appropriate hospital where the emergency room staffs have received specialized training in the treatment of poisoning emergencies.

In 1976, the Galveston Center assisted with more than 4,700 cases of accidental and intentional poisonings in the Southeast Texas area.

In only about 15% of the poisoning inquiries was there a necessity for medical treatment of the patient. Frequently, home care can be recommended that will preclude a trip to the emergency room or the family physician.

Roper poll shows Americans prefer private insurance

Most Americans prefer the present system of private insurance over a national health plan, according to a Roper report.

Roper found that although public satisfaction with medical care is up, a majority consider its price unreasonable, according to the *Blue Shield News*.

The survey also showed while the number of Americans covered by health insurance has not changed, more people have more types of coverage.

In the October 1976 survey, more than half the respondents, 52%, said they preferred the present health system over a national health insurance plan, an increase of two percentage points since 1975. Thirty-nine per cent said they favored a national plan.

In the October 1973 and 1975 surveys, 50% said they preferred the private system.

Texas Medical Association honors fourteen Texas reporters

Fourteen members of the Texas media have been honored by the Texas Medical Association for their work in health communications.

Eight winners will receive $250 and a plaque, and six more reporters will receive merit citations.

The writers entered a wide variety of articles in the annual Anson Jones Award competition for excellence in communicating health information to the public. The contest included magazine, newspaper, television and radio categories.

Winners in the competition include Charlotte Guest, *Fort Worth Star Telegram;* Mary Dudley, *Austin American-Statesman;* Ray H. Greene, *The Gilmer Mirror;* Le Kilgore, *San Angelo Standard-Times;* and William Broyles, *Texas Monthly*.

Other winners include Harvie Jordan, KVET Radio, Austin; Napoleon Johnson, KPRC-TV, Houston; and Cecile Burandt, KFDM-TV, Beaumont.

Citation of merit winners include A. Shane Fox, KTRH Radio, Houston; Karen Wilson, KSAT-TV, San Antonio; and Olin Fregia, KFDM-TV, Beaumont.

Sue Dye, *Temple Daily Telegram;* Jim Reynolds, *Crosbyton Review;* and Marsha Carr Tucker, *Houston Magazine* will receive citations.

Judges from the fields of publishing, broadcasting and medicine helped select winners. Garth Jones, bureau chief, The Associated Press, Austin; Dr Norris G. Davis, professor of journalism, The University of Texas at Austin, and Mrs. Pat Baldwin, a former assistant editor of *Texas Medicine* and now a freelance journalist in Houston, judged print entries. Bonner McLane, executive vice president of the Texas Association of Broadcasters, chose three judges to pick broadcast winners. The TMA Council on Communication made final selection of all entries.

Winners will receive plaques and cash awards during TMA's 110th annual meeting May 12-15 in Houston.

New CPT manual available

"Physicians' Current Procedural Terminology," the fourth edition, is now available from the AMA.

More than 2,000 new and revised medical procedures are listed in the book. CPT-4 represents a comprehensive and current system for naming, coding and reporting medical procedures and services and provides a nationwide uniform language among physicians, patients and third parties.

A six-member ad hoc editorial committee led by Harold N. Schwinger, MD, New York, reviewed the information for the book. Suggestions were received from 37 specialty societies, medical societies, government agencies, and individual physicians.

Users of the current edition will benefit from a new CPT updating service which periodically provides new and revised procedures for insertion in the book. CPT codes are also available on computer tapes. For the new book, write Order Dept., AMA Headquarters.

Directory of Texas foundations is available

The *1976 Directory of Texas Foundations* with detailed information about more than 1,000 foundations is now available.

The directory is the property of the Texas Foundations Research Center, a non-profit, tax-exempt organization.

Copies of the directory may be purchased by mailing a check or money order to Texas Foundations Research Center, P.O. Box 5494, Austin, Texas 78763. Cost per copy is $10.95 including postage and handling charges, with an additional 55¢ sales tax.

AMA enters litigation on professional advertising

Unrestricted advertising of prices or fees in newspapers by attorneys or physicians is not in the best interest of their clients or patients, declares a brief filed with the U.S. Supreme Court by the American Medical Association.

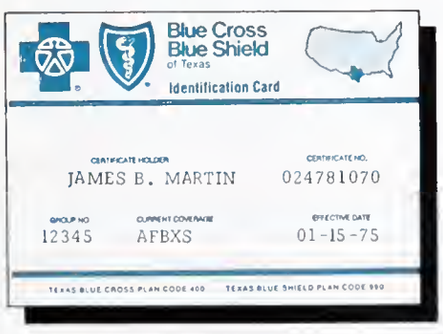
The AMA brief was filed as a friend of the court in a case appealed from the Supreme Court of Arizona in which two attorneys are seeking to overturn the proscription of the Arizona State Supreme Court against unrestricted advertising of fees by attorneys in the state.

Advertising in the highly sophisticated field of medicine raises considerations quite different from the advertising of consumer products and simple services, the AMA said.

There is significant potential that some apparently truthful claims will mislead the ordinary consumer to his economic and physical detriment. There is also risk that some non-deceptive statement can cause the quality of service rendered by physicians to deteriorate. For instance, the physician may fail to order necessary lab tests and x-rays because the cost would exceed his advertised fee for a given service, the AMA said.

The brief said that the AMA does not proscribe all advertising by physicians. The ban is against solicitation of patients through use of testimonials, claims of expected results of treatment, claims that imply superior skills to other physicians, or claims that contain incorrect or incomplete facts.

Do you think enough of your employees to provide the best?



You might get other group health insurance at lower rates. But in a dollar-for-dollar comparison, there are three simple reasons why Blue Cross and Blue Shield coverage is better:

1. It returns more of its premiums in claim payments to policyholders than most other major insurance companies.
2. And it doesn't set maximum dollar limits on most hospital services.
3. The Blue Cross and Blue Shield ID card admits members to most hospitals anywhere in the country, as simply as possible.

Blue Cross and Blue Shield coverage means a lot to your employees. And it shows *they* mean a lot to you.

Blue Cross
GROUP HOSPITAL SERVICE, INC.
Blue Shield
GROUP LIFE & HEALTH INSURANCE COMPANY
of Texas

®, Registered Mark Blue Cross Association
®, Registered Service Mark of the National Association of Blue Shield Plans

New fee schedule effective for TMA Members Retirement Trust

A new schedule of trustees fees for the Texas Medical Association Members Retirement Trust became effective Jan 1, 1977.

This new schedule was approved by the TMA Council on Medical Service and Insurance and the TMA Board of Trustees after a review of the program's operating expenses and revenue.

The new fee schedule has been simplified, and it replaces many of the charges which were made for a variety of individual actions with a single charge based on the market value of each account.

A participant can now make contributions on a monthly or quarterly basis without incurring the $10 charge for more than two contributions annually which was charged under the old schedule.

This was the first request by Mercantile National Bank of Dallas for a fee increase since 1973, and based on the data presented on the operational expenses of the program, the Council on Medical Service and Insurance and the TMA Board of Trustees agreed that the new schedule is appropriate.

Based on data presented by the Mercantile National Bank, operating expenses for the program have exceeded gross revenue for each of the past two years. Gross revenue has remained static during this period, while expenses continued to increase.

The basic enrollment fee per employer group is $35. However, if assets are transferred from a previous plan, there is an additional $10 charge per participant (minimum of $50 charge for transfer of assets per group). The enrollment fee covers reimbursement for various administrative expenses, legal expenses, printing, postage, and other expenses.

The new minimum annual fee per employer group is $125. Annual fees are based on investment servicing which is .25% of the first $100,000 market value, .20% of the next $400,000 market value, and .15% in excess of $500,000 market value.

The cost for maintaining individual records per participant is $10, the cost for security transactions is $2.50, the cost of distribution fees in a lump sum is $10, and the cost of distribution fees in periodic payments is $3 per payment.

The transfer fee is 1% of the fair market value of the trust assets for transferring assets and records to a successor trustee.

The Bank is also authorized to charge for extraordinary services depending on the nature of the services required and the time demanded.

Investment performance for TMA Members' Retirement Plan and Trust

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1977 Through 1/31	3 Years Ended 12/31/76	5 Years Ended 12/31/76	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	−8.1%	− 9.3%	− 8.3%	1.3%
Loomis-Sayles Mutual Fund	−7.2%	− 1.6%	− 4.4%	3.3%
Mercantile Bank Equity Fund	−4.9%	+ 5.9%	−17.8%	3.7%
Mercantile Bank Fixed Income Fund	−1.3%	+ 0.2%	− 5.5%	7.4%
T Rowe Price Growth Stock Fund	−9.7%	− 2.6%	−16.6%	2.3%
T Rowe Price New Income Fund	−3.2%	+ 2.7%	N/A	7.9%
Stein Roe & Farnham Balanced Fund	−5.2%	− 0.5%	− 2.7%	3.2%
Standard & Poor 500 Stock Average	−5.1%	+10.4%	+ 5.3%	
Dow Jones Industrial Average	−5.0%	+18.1%	+12.9%	

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

AUSTIN: GOVERNOR'S STATE OF STATE MESSAGE EMPHASIZES MEDICAL MATTERS. Gov Dolph Briscoe in his address to the 65th Session of the Texas Legislature said, "We can be pleased with the progress being made in medical education. The need for increased numbers of doctors, dentists, and associated health care personnel makes it imperative that we continue providing adequate financial support to the increased number of students who will be enrolled in these areas during the next two years. This is a high priority," he said. On the subject of medical professional liability insurance, Gov Briscoe said the primary public health issue in this session of the Texas Legislature concerns the medical malpractice insurance crisis. "We all learned last session that solutions to this problem are not easy to come by. The symptoms of the crisis are evident throughout Texas and the nation. Older doctors are being encouraged, if not forced, to retire prematurely because of high insurance rates and lack of availability of insurance. Many doctors in rural areas who occasionally performed surgical procedures as adjuncts to their general practice cannot afford the rates and have ceased the service," Gov Briscoe said. "Care of indigents and emergency patients is threatened because of the huge increases in insurance rates for doctors who traditionally have volunteered much of this service. It would be a disservice to the people of Texas if this controversy becomes nothing more than a bitter debate between professional men and women.

"I believe this legislature has the courage to make the right decision in this crucial problem. The Texas Medical Professional Liability Study Commission spent many months outlining both the program and potential solutions. Its conclusion did not please everyone, but in my opinion these recommendations offer our best hope for a fair and workable answer. Additional proposals are also being introduced and these deserve your full attention. But, the excellent work of this commission under the leadership of Dean Page Keeton, one of our most distinguished legal scholars, should be the basis for the solutions we have been called upon to deliver."

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber, Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

WASHINGTON: NATIONAL HEALTH INSURANCE BILLS INTRODUCED. S 3 and HR 21, 22, and 23 have been introduced by Sen Edward M. Kennedy (D-Mass) and Rep James C. Corman (D-Calif). The companion bills are the Health Security Act of 1977 backed by organized labor. The legislation would create a massive tax-financed federally administered national health insurance program, and restructure the present method of health care delivery in the United States. Sen Thomas J. McIntyre (D-NH) has introduced S 5, the National Health Care Act of 1977. Rep Omar Burleson (D-Tex) has introduced HR 5 which provides a comprehensive program of health care by making health care insurance available to all Americans. The proposal is favored by the National Health Insurance Association of America.

The AMA proposed program of national health insurance has been introduced in the House as HR 1818 by Rep Tim Lee Carter (R-Ky), Rep John J. Duncan (R-Tenn), and Rep John M. Murphy (D-NY) and in the Senate as S 218 by Sen Clifford P. Hansen (R-Wyo). The AMA bill, the Comprehensive Health Care Insurance Act of 1977, builds on the strengths of the present system of health care and is designed to make available thorough coverage to the entire popula-

tion, comprehensive private health insurance that will protect against ordinary and catastrophic expenses of illness. Broad-ranged benefits would provide total hospital needs and full physician care (including preventive care) in and out of the hospital. Skilled nursing facility care, home health services, lab and x-ray services, and other services are also included in the benefit package. Federal costs would be limited primarily to premium assistance for individuals and families with little income. No special taxes to finance the program are called for. A large majority of the population would continue to be protected as they are by insurance provided through employment. Under the bill, the employer would pay the major portion of the premium, with the employee paying any balance. For any employer experiencing specified increased costs for providing insurance, special tax assistance would be provided under a five-year program. Federal payment of full premiums for the poor and contribution toward premiums for others related to their income would assure the same broad coverage for all persons. Premium assistance would also enable the elderly to obtain coverage to build their Medicare benefits to the level of care provided for other population groups. An individual would select the type of insurance or plan through which he would receive his health care benefits. In addition, the individual would retain the right to choose a physician. No deductible is required for any person. A co-insurance would be applicable, but the amount would be scaled to income with a fixed upper limit for all persons. However, individuals below certain income levels would not pay any co-insurance. Commenting at a press conference which followed the introduction of this legislation, AMA president Richard E. Palmer, MD, urged the 95th Congress to consider carefully "this forthright approach to national health insurance. The bill would extend health insurance to every American at a cost the nation could afford. It is a viable solution to the problem of providing quality health and medical care to everyone," Dr Palmer said.

AUSTIN: TEXAS COMMITTEE CHAIRMEN APPOINTED. Lt Gov Bill Hobby has appointed the following Senators as chairmen of health-related committees: Tom Creighton, Mineral Wells, Economic Development; Oscar Mauzy, Dallas, Education; A. M. Aikin, Paris, Finance; Babe Schwartz, Galveston, Jurisprudence; Chet Brooks, Pasadena, Human Resources; Bill Moore, Bryan, State Affairs. Speaker of the House Bill Clayton has appointed the following Representatives as chairmen of health-related committees: Bill Presnal, Bryan, Appropriations; Lyndon Olson, Jr., Waco, Higher Education; John Wilson, LaGrange, Health and Welfare; Bob Davis, Dallas, Insurance; Ben Z. Grant, Marshall, Judiciary; Craig A. Washington, Houston, Social Services; Tom Uher, Bay City, State Affairs.

WASHINGTON: MEDICAID FRAUD BILLS INTRODUCED. Rep Dan Rostenkowski (D-Ill) and Rep Paul G. Rogers (D-Fla) have introduced HR 5 dealing with Medicaid fraud and abuse. The bill is likely to be the subject of House hearings along with HR 1701, a fraud and abuse bill introduced by Rep James H. Scheuer (D-NY). Sen Herman E. Talmadge (D-Ga) has introduced S 143, a fraud and abuse bill similar to the one he introduced during the last Congress. Among the 32 sponsors of the bill are Sen Russell B. Long (D-La) and Sen Abraham A. Ribicoff (D-Conn) and Sen Robert Dole (R-Kan).

Rep Rostenkowski and Rep Rogers have also introduced HR 3, the Medicare-Medicaid Anti-Fraud and Abuse Amendments of 1977. The proposal is a revised and expanded version of legislation to control fraud and abuse in Medicaid and Medicare that both Congressmen had introduced in the closing days

of the 94th Congress. In the Senate, companion legislation has been introduced by Sen Talmadge. The new bills would modify existing law to clarify the ban on the use of "factoring arrangements" for the Medicare and Medicaid payments to health care providers; define "shared health facilities" (so-called "Medicaid Mills"); redefine and upgrade criminal penalties for fraud under Medicare and Medicaid; require the Secretary of HEW to suspend individual practitioners under Medicare who are convicted of Medicare/Medicaid-related criminal activities (states would be required to take similar activity under their Medicaid program); and allow federal access to the books of providers of services under Medicaid (to the same extent presently provided to states).

WASHINGTON: PROFILE OF THE 95th CONGRESS. The 95th Congress includes 292 Democrats and 143 Republicans in the House, 61 Democrats and 38 Republicans in the Senate, and no Independents in the House and one Independent in the Senate. The new Congress is composed of 100 men in the Senate and 418 men and 17 women in the House. The youngest Representative is 27, while the youngest Senator is 34. The oldest Representative is 77, and the oldest Senator is 80. The average age in the House is 49, and the average age in the Senate is 54. Sixty-nine Senators are Protestant, while 255 Representatives are Protestant. Twelve Senators and 107 Representatives are Catholic. Five Senators and 18 Representatives are Jewish. Three Senators and four Representatives are Mormon. In the House there are 215 attorneys, 81 bankers and businessmen, 45 educators, 14 farmers and ranchers, 22 career government officials, 24 journalists and communications executives, two physicians, one veterinarian, and two workers and skilled tradesmen. In the Senate there are 65 attorneys, 13 businessmen and bankers, six educators, six farmers and ranchers, four journalists and communications executives, one veterinarian, and two geologists.

WASHINGTON: FTC SERVES SUBPOENA ON MEDICAL GROUPS. As a part of its increasing interest in the "rising cost of medical care" viewed from an antitrust perspective, the Federal Trade Commission (FTC) has served subpoenas on 60 medical societies. Officials declined to say how many. The FTC wants information on the supply of physicians and allocation of specialties and allied medical fields. The unheralded action follows a notice by the FTC last year that it was commencing "an investigation to determine whether the AMA may have illegally restrained the supply of physicians and health care services." The announcement cited activities relating to accreditation of medical schools and graduate programs, definition of fields of practice, and limitation on forms of health care delivery. The FTC officials emphasize that the latest actions strictly amount to information gathering on competition in the delivery and financing of health care services. The matter could take months, perhaps years, to resolve should the FTC decide to file complaints or issue trade regulation rules. There is a possibility of consent agreements to avoid the drawn-out court battles, and the FTC can and does send reports on its findings to Congress for possible translation into regulatory laws.

WASHINGTON: MALPRACTICE STATUTE UPHELD. The US Supreme Court in a brief order has refused to review a decision by the Florida Supreme Court which upheld the Medical Malpractice Reform Act. Among other things, the law makes it mandatory for a complainant to submit his claim to a pre-trial screening panel before filing a lawsuit. The panel's conclusion as to liability may be admitted as evidence at a later trial.

CONTINUING EDUCATION COURSES

MARCH

Adolescent's Medical Care

Title: Current Concepts in Adolescent Medicine
Sponsors: UT Health Science Center at Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: UT Health Science Center at Dallas
Dates: March 11-12, 1977
Duration: Continuous
Fee: Physicians, $50; Non-physicians, $25
Designed For: General practitioners; Specialists in Pediatrics, Psychiatry
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, lecture, open question, panel, seminar
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Title: Current Concepts in Adolescent Medicine
Sponsors: Society for Adolescent Medicine; Department of Pediatrics, Southwestern Medical School, UT Health Science Center at Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: UT Health Science Center at Dallas
Dates: March 11-12, 1977
Fee: Complete program (lectures, groups, syllabus, Friday banquet, Saturday luncheon), $50; Lectures, groups, Saturday luncheon, $30
Credit: 13 hours, Category 1, AMA Physician's Recognition Award
Contact: John C. Edlin, MD, 2710 Stemmons Freeway, Suite 802. Dallas 75207

Basic Sciences: Microbiology & Immunology

Title: Basic Immunology for the Clinician
Sponsors: UT Health Science Center at Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: UT Health Science Center at Dallas
Dates: March 2-5, 1977
Duration: Continuous; 30 total course hours
Designed For: General practitioners; Specialists in Pediatrics, Internal Medicine
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, seminar
Contact: June Bovill, Assistant to Associate Dean for Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Family Medicine

Title: Spring Seminar
Sponsor: Texas Academy of Family Physicians, Permian Basin Chapter
Location of Course: Indian Lodge, Fort Davis
Dates: March 25-26, 1977
Duration: Continuous; 9 am-4 pm; 6 total course hours
Fee: $30
Designed For: General practitioners; Specialists in General Surgery, Internal Medicine
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: William Bart Pate, MD, 202 N Second St, Alpine 79830

Geriatrics

Title: Geriatrics '77
Sponsor: UT Medical Branch, Galveston
Location of Course: Galvez Hotel, Galveston
Dates: March 24-26, 1977
Duration: Continuous; 8 hours instruction per day; 20 total course hours
Fee: $80 (tentative)
Designed For: General practitioners; Specialists
Enrollment: Minimum, 40; Maximum, 75
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar, television
Contact: NeKee McNulty, Assistant Director, Continuing Education Division, UT Medical Branch, Galveston 77550

Internal Medicine

Title: Internal Medicine for the Practitioner
Sponsor: UT Health Science Center at Houston
Dates: March 7-10, 1977
Fee: To be announced
Designed For: Specialists in Internal Medicine
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Grant Taylor, MD, Office of the Director, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: The Physiological Basis of Clinical Disease
Sponsor: American College of Physicians
Location of Course: UT Health Science Center at Dallas
Dates: March 14-17, 1977
Duration: Continuous; 9 am-5 pm; 28 total course hours
Fee: American College of Physicians members, residents, $120; Nonmembers, $175; Associates, $60

Designed For: General practitioners; Specialists
Enrollment: Minimum, 100; Maximum, 400
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: Linda M. Salsinger, Registrar, American College of Physicians, 4200 Pine St, Philadelphia 19104

Malignant Disease

Title: 30th Annual Symposium on Fundamental Cancer Research: Cell Differentiation and Neoplasia
Sponsors: UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute; National Cancer Institute, American Cancer Society
Location of Course: Shamrock Hilton Hotel, Houston
Dates: March 2-4, 1977
Duration: 8 am-5 pm
Fee: To be announced
Designed For: General practitioners; Full- and part-time specialists
Enrollment: Maximum, 1200
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Grant Taylor, MD, Office of the Director, UT Health Science Center at Houston, Box 20367, Houston 77025

Neurology

Title: 28th Western Institute on Epilepsy, Contemporary Perspectives in the Treatment of Epilepsy
Sponsors: The Blue Bird Circle Children's Clinic for Neurological Disorders; Baylor College of Medicine; The University of Texas
Location of Course: Shamrock Hilton Hotel, Houston
Dates: March 17-19, 1977
Duration: Continuous
Fee: To be announced
Designed For: General practitioners; Specialists in Internal Medicine, Pediatrics, Neurology
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Title: Clinical Neurology
Sponsors: UT Health Science Center at Houston
Dates: March 22-April 19, 1977
Duration: 2 hours instruction each Tuesday; 10 total course hours
Designed For: Specialists in Neurology
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Grant Taylor, MD, Office of the Director, UT Health Science Center at Houston, Box 20367, Houston 77025

Obstetrics & Gynecology

Title: A Symposium for the Practicing Physician: Management of High Risk Obstetrical and Neonatal Patients
Sponsors: Departments of Obstetrics & Gynecology and Pediatrics, UT Medical School at Houston; UT Medical School at San Antonio; UT Medical School at Dallas; UT Medical Branch, Galveston
Location of Course: The Woodlands Executive Conference Center; The Woodlands, Tex
Dates: March 16-19, 1977
Contact: Office of Continuing Education, UT Medical School at Houston, Box 20708, Houston 77025

Ophthalmology

Title: Ophthalmology for the Non-Ophthalmologist
Sponsor: Texas Society for the Prevention of Blindness, El Paso Branch
Location of Course: El Paso
Date: March 19, 1977
Duration: 6 total course hours
Fee: $20
Designed For: General practitioners; Specialists in Pediatrics, Internal Medicine
Credit: AAFP Elective
Teaching Methods: Audiovisual materials, lecture, open question, patient demonstration
Contact: Miss Joanne Allen, Director, West Texas Division, Texas Society for the Prevention of Blindness, Box 9755, El Paso 79987

Orthopedic Surgery

Title: 13th Annual Orthopedic Symposium: Clinical Management and Pathology of Selective Orthopedic Maladies
Sponsors: St Luke's Episcopal Hospital, Houston; Baylor College of Medicine, Houston
Location of Course: Jesse H. Jones Auditorium, Texas Medical Center, Houston
Dates: March 31-April 2, 1977
Contact: Joseph Barnhart, MD, Houston Orthopedic Clinic, 5620 Greenbriar, Houston 77005

Physical Medicine & Rehabilitation

Title: Pathophysiology and Clinical Management of Neuromuscular Disease
Sponsors: Veterans Administration Hospital, Houston; Baylor College of Medicine, Houston
Location of Course: Shamrock Hilton Hotel, Houston

Dates: March 24-26, 1977
Duration: Continuous; 8 hours per day; 2½ days; 20 total course hours
Fee: None
Designed For: General practitioners; Specialists in Physical Medicine and Rehabilitation, Neurology
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar, live clinic
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Psychiatry

Title: Course on Hypnosis
Sponsor: Baylor College of Medicine, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: March 11-12, 1977
Duration: Continuous
Designed For: General practitioners; Specialists in Psychiatry, Internal Medicine, Obstetrics
Credit: AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Clinical conference, enrollee performs procedure, lecture, open question
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Title: Rorschach's Test: Intermediate Level Workshop
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: March 19-20, 1977
Duration: 6 hours Saturday; 5 hours Sunday; 11 total course hours
Fee: $85
Designed For: Specialists in Psychology
Enrollment: Maximum, 20
Teaching Methods: Audiovisual materials, lecture, open question, television
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Title: Group Psychotherapy (Intermediate)
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: March 26-May 7, 1977
Duration: Intermittent; 3 hours instruction Saturday mornings; 7 weeks; 21 total course hours
Fee: $125
Designed For: Specialists in Psychiatry, Psychology
Enrollment: Maximum, 12
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, open question, patient demonstration, seminar
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Radiology and Radioisotopes

Title: General Diagnostic Radiology Seminar
Sponsors: UT Health Science Center at Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: Fairmont Hotel, Dallas
Dates: Feb 10-12, 1977
Duration: Continuous; 3 days; 18 total course hours
Fee: $175; Residents, $75
Designed For: Specialists in Radiology
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, seminar
Contact: Robert Berk, MD, Chairman, Department of Radiology, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Surgery

Title: Plastic Surgery for General Surgeons
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: March 4-5, 1977
Duration: Continuous; 12 total course hours
Fee: $150
Designed For: General practitioners; Specialists
Enrollment: Minimum, 20; Maximum, open
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Title: Spring Clinical Conference
Sponsor: Dallas Southern Clinical Society
Location of Course: Hilton Hotel, Dallas
Dates: March 28-30, 1977
Duration: Continuous; 3 days; 25 total course hours
Fee: $75

Designed For: General practitioners; Specialists
Teaching Methods: Audiovisual materials, clinical conference, lecture, open question, panel, patient demonstration, seminar
Contact: Robert L. Heath, Executive Officer, Dallas Southern Clinical Society, 3630 Noble Ave, Dallas 75204

APRIL

Adolescent's Medical Care

Title: Symposium on Sports Medicine
Sponsors: UT Health Science Center at San Antonio; Student Health Services at UT, Austin
Location of Course: Joe C. Thompson Conference Center, Austin
Dates: April 16-17, 1977
Duration: 6 hours Saturday; 4 hours Sunday; 10 total course hours
Fee: Physicians, $75; Coaches, trainers, $35; Late registration (after April 2), $90/$50
Designed For: Team physicians; Coaches; Trainers
Enrollment: Minimum, 50; Maximum, 300
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, patient demonstration, television
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Cardiovascular Disease

Title: Cardiovascular Echocardiography
Sponsors: American College of Physicians; Baylor College of Medicine, Houston
Location of Course: Jesse H. Jones Library, Texas Medical Center, Houston
Dates: April 20-22, 1977
Duration: Continuous; 3 days; 6-7 hours instruction per day; 18-20 total course hours
Fee: American College of Physicians members, residents, fellows, $130; Nonmembers, $175; Associates, $65
Designed For: Specialists in Internal Medicine, Cardiology
Enrollment: Minimum, 50; Maximum, 250
Credit: 18 hours, AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, workshops
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Internal Medicine

Title: Current Topics in Nephrology
Sponsor: American College of Physicians
Location of Course: Brooke Army Medical Center, Ft Sam Houston
Dates: April 11-13, 1977
Duration: Continuous; 9 am-5 pm; 3 days; 21 total course hours
Fee: American College of Physicians members, residents, $100; Nonmembers, $150; Associates, $50
Designed For: General practitioners; Specialists
Enrollment: Minimum, 100; Maximum, 300
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, seminar
Contact: Linda M. Salsinger, Registrar, American College of Physicians, 4200 Pine St, Philadelphia 19104

Ophthalmology

Title: Phacoemulsification Course
Sponsor: Baylor College of Medicine
Date: April 1977
Duration: 8 hours instruction per day; 3 days; 24 total course hours
Fee: $1,000
Designed For: Specialists in Ophthalmology
Enrollment: Maximum, 15
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, bedside rounds, clinical conference, enrollee performs procedure, laboratory work, programmed instruction, lecture, open question, operative human surgery, patient demonstration, television
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Cancelled: Advanced Course in Ophthalmic Microsurgery; Twelve Oaks Hospital, Houston; April 14-16, 1977

Title: Neuro-Ophthalmology Basic and Clinical Science Course
Sponsors: Texas Ophthalmological Association; UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: April 1-2, 1977
Duration: Continuous; 8 am-5 pm; 2 days; 16 total course hours
Fee: Texas Ophthalmological Association members, no fee; Nonmembers, $100
Designed For: Specialists in Ophthalmologyy, Neurology, Neurological Surgery
Enrollment: Maximum, 80
Credit: 15 hours, Category 1, AMA Physician's Recognition Award
Teaching Method: Audiovisual materials
Contact: Frank J. Bajandas, MD, Assistant Professor, Division of Ophthalmology, 7703 Floyd Curl Dr, San Antonio 78284

Title: 14th Annual Baylor Ophthalmology Residents Alumni Meeting
Sponsor: Baylor College of Medicine, Houston
Dates: April 1-2, 1977
Fee: To be announced
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Pediatrics

Title: Problems of the Newborn
Sponsors: Children's Hospital, Santa Rosa Medical Center, San Antonio; Department of Pediatrics, UT Health Science Center at San Antonio
Location of Course: Children's Hospital, San Antonio
Dates: April 30-May 1, 1977
Duration: Continuous; 4 hours instruction per day
Fee: $20
Designed For: General practitioners; Specialists
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Howard A. Britton, MD, Chairman, Department of Pediatrics, Children's Hospital, Box 7330, Station A, San Antonio 78285

Physical Medicine & Rehabilitation

Title: Eleventh Annual Review Course in Physical Medicine & Rehabilitation
Sponsors: Veterans Administration Hospital, Houston; Baylor College of Medicine, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: April 18-28, 1977
Duration: Continuous; 80 total course hours
Fee: $150
Designed For: General practitioners; Specialists in Physical Medicine & Rehabilitation
Enrollment: Minimum, 50; Maximum, 100
Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar, live clinic
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Psychiatry

Title: Analysis of Fantasy
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: April 23-24, 1977
Duration: Continuous; 11 total course hours
Fee: $80
Designed For: Specialists in Psychology
Enrollment: Maximum, 20
Teaching Methods: Audiovisual materials, open question, seminar
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Radiology & Radioisotopes

Title: Clinical Nuclear Imaging—1977
Sponsors: UT Health Science Center at Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: Fairmont Hotel, Dallas
Dates: April 28-30, 1977
Duration: Continuous; 18 total course hours
Fee: $175; Residents, $75
Designed For: Specialists in Radiology
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, lecture, open question, seminar
Contact: Robert Parkey, MD, Chief, Section of Nuclear Medicine, Department of Radiology, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Surgery

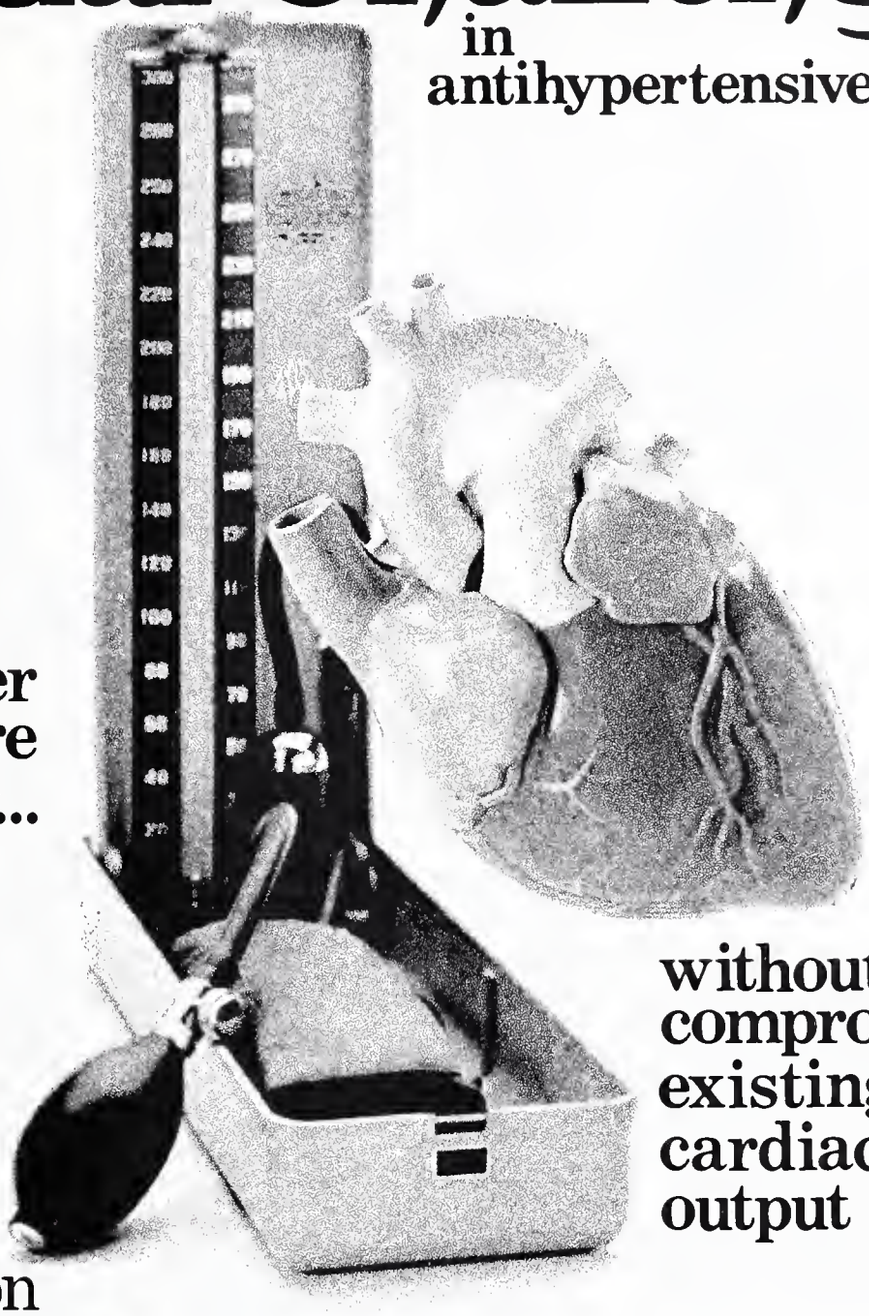
Title: Review Course in Surgery
Sponsor: Baylor College of Medicine, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: April 1-2, 1977
Duration: Continuous; 6 hours per day; 1½ days; 9 am-5 pm; 18 total course hours
Designed For: General practitioners; Specialists in Surgery, Family Medicine
Enrollment: Maximum, 150
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Urology

Title: Texas Urological Society Annual Meeting
Sponsor: Texas Urological Society
Location of Course: La Posada Motor Hotel, Laredo
Dates: April 15-16, 1977
Duration: Continuous
Fee: $100
Designed For: Specialists in Urology
Enrollment: Maximum, 100
Credit: Pending
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Carlos H. Mata, MD, Secretary-Treasurer, 1012 Santa Ursula Ave, Laredo 78040

A Dual Challenge

in antihypertensive therapy



to lower blood pressure effectively...

without compromising existing cardiac output

in hypertension

TABLETS: 250 mg, 500 mg, and 125 mg

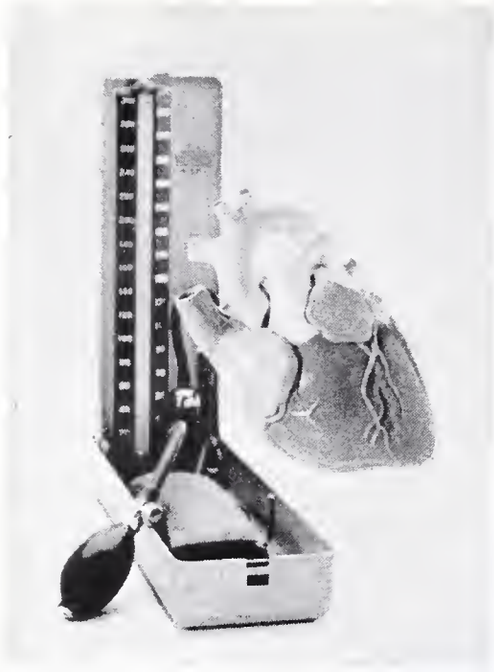
ALDOMET® (METHYLDOPA | MSD)

helps lower blood pressure effectively... usually with no direct effect on cardiac function–cardiac output is usually maintained

ALDOMET is contraindicated in active hepatic disease, hypersensitivity to the drug, and if previous methyldopa therapy has been associated with liver disorders.
It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

For a brief summary of prescribing information, please see following page.

MSD
MERCK SHARP & DOHME



in hypertension

ALDOMET®

(METHYLDOPA|MSD)

helps lower blood pressure effectively... usually with no direct effect on cardiac function– cardiac output is usually maintained

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis; if previous methyldopa therapy has been associated with liver disorders (see Warnings); hypersensitivity.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between 6 and 12 months of therapy Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at 6 and 12 months after the start of therapy If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first 3 weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first 2 to 3 months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first 6 to 12 weeks of therapy or whenever an unexplained fever occurs. If fever and abnormalities in liver function tests or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, a reversible reduction of the white blood cell count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur. Patients should be followed carefully to detect side reactions or unusual manifestations of drug idiosyncrasy.

Use in Pregnancy: Use of any drug in women who are or may become pregnant requires that anticipated benefits be weighed against possible risks; possibility of fetal injury can not be excluded.

Precautions: Should be used with caution in patients with history of previous liver disease or dysfunction (see Warnings). May interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, falsely high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. It is important to recognize this phenomenon before a patient with a possible pheochromocytoma is subjected to surgery. Methyldopa is not recommended for patients with pheochromocytoma. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has recurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: *Central nervous system:* Sedation, headache, asthenia or weakness, usually early and transient; dizziness, lightheadedness, symptoms of cerebrovascular insufficiency, paresthesias, parkinsonism, Bell's palsy, decreased mental acuity, involuntary choreoathetotic movements; psychic disturbances, including nightmares and reversible mild psychoses or depression.

Cardiovascular: Bradycardia, aggravation of angina pectoris. Orthostatic hypotension (decrease daily dosage). Edema (and weight gain) usually relieved by use of a diuretic. (Discontinue methyldopa if edema progresses or signs of heart failure appear.)

Gastrointestinal: Nausea, vomiting, distention, constipation, flatus, diarrhea, mild dryness of mouth, sore or "black" tongue, pancreatitis, sialadenitis.

Hepatic: Abnormal liver function tests, jaundice, liver disorders.

Hematologic: Positive Coombs test, hemolytic anemia. Leukopenia, granulocytopenia, thrombocytopenia.

Allergic: Drug-related fever, myocarditis.

Other: Nasal stuffiness, rise in BUN, breast enlargement, gynecomastia, lactation, impotence, decreased libido, dermatologic reactions including eczema and lichenoid eruptions, mild arthralgia, myalgia.

Note: Initial adult dosage should be limited to 500 mg daily when given with antihypertensives other than thiazides. Tolerance may occur, usually between second and third month of therapy; increased dosage or adding a thiazide frequently restores effective control. Patients with impaired renal function may respond to smaller doses. Syncope in older patients may be related to increased sensitivity and advanced arteriosclerotic vascular disease; this may be avoided by lower doses.

How Supplied: Tablets, containing 125 mg methyldopa each, in bottles of 100; Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486 J6AM07(707)

MSD MERCK SHARP & DOHME

AMA Expands Continuing Medical Education Opportunities in 1977.

Now you can choose from 15 regional CME meetings!

Recognizing the importance of continuing medical education to its members, the AMA has greatly expanded its CME programs. During 1977, the AMA will offer 15 regional CME meetings around the country in addition to its scientific programs at both the Annual Convention and Winter Meeting.

The purpose of the regional programs is to make it easier and more convenient for you to continue your medical education by bringing the meetings closer to your hometown and by scheduling them on the weekends to avoid interference with your practice.

All courses are approved by the AMA Council on Continuing Physician Education for Category 1 credit toward an AMA Physician's Recognition Award. A syllabi written by medical school faculties is provided with every course.

Specific information on course location, fees, academic program, faculty, and hotel reservations will be available approximately 2 months before each course date. Please write to address below at that time stating your selection(s). Print name, address, and office phone number.

1977 Regional Schedule

Tulsa, Oklahoma	January 22-23
Birmingham, Alabama	February 5-6
*Lake Tahoe, Nevada	February 11-13
Denver, Colorado	February 19-20
*Tarpon Springs, Florida	March 4-6
Detroit (Southfield), Michigan	March 26-27
New York (Westchester), New York	April 16-17
Houston, Texas	May 15
Hartford, Connecticut	September 10-11
*Lake of the Ozarks, Missouri	September 16-18
Chicago, Illinois	September 24-25
*Hot Springs (Homestead), Virginia	Sept. 30-Oct. 2
*Huron, Ohio	October 7-9
*Honolulu, Hawaii	Oct. 30-Nov. 4
Hershey, Pennsylvania	November 18-19

AMA's 126th Annual Convention

San Francisco, California	June 18-22

AMA's Winter Scientific Meeting

Miami Beach, Florida	December 10-13

AMA Spokesmanship Seminars

Chicago, Illinois	August 13-14
(Marriott O'Hare Hotel)	November 12-13

*Courses end at midday for recreation activities

AMA Department of Meeting Services
535 North Dearborn Street
Chicago, Illinois 60610

Depression comes in shades of blue

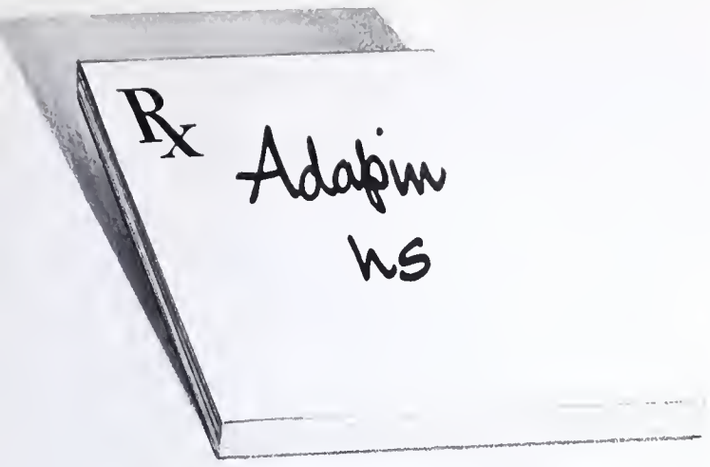
Insomnia is a shade of blue that often accompanies depression

When they see life in shades of blue... help them see life in all its colors

Adapin®

(doxepin HCl)

Please see prescribing information on the right-hand page



Available as

10-mg. capsules

25-mg. capsules

50-mg. capsules

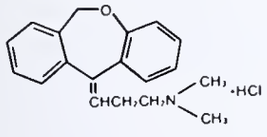
ADAPIN®

(Doxepin HCl)

Prescribing information:

DESCRIPTION

Adapin (doxepin HCl) is an isomeric mixture of N, N-dimethyl-dibenz(b,e) oxepin- △11(6H), γ propylamine hydrochloride.



ACTIONS

Adapin has a variety of pharmacological actions with its predominant action on the central nervous system. While its mechanism of action is not known, studies have demonstrated that it is neither a monoamine oxidase inhibitor nor a primary stimulant of the central nervous system.

INDICATIONS

In controlled clinical evaluations, **Adapin** has shown marked antianxiety and significant antidepressant effects. **Adapin** has been found to be well tolerated even in elderly patients.

Adapin is indicated for the treatment of patients with:

1. Psychoneurotic anxiety and/or depressive reactions.
2. Mixed symptdms of anxiety and depression.
3. Anxiety and/or depression associated with alcoholism.
4. Anxiety associated with organic disease.
5. Psychotic depressive disorders including involutional depression and manic-depressive reactions.

Target symptoms of psychoneurosis that respond particularly well to **Adapin** include: anxiety, tension, depression, somatic symptoms and concerns, insomnia, guilt, lack of energy, fear, apprehension and worry.

Because **Adapin** provides antidepressant as well as antianxiety effects, it is of particular value in patients in whom anxiety masks depression. Patients who have not responded to other antianxiety or antidepressant drugs may benefit from **Adapin.**

In a large series of patients systematically observed for withdrawal symptoms, none were reported—a finding which is consistent with the virtual absence of euphoria as a side effect and the lack of addictive potential characteristic of this type of chemical compound.

CONTRAINDICATIONS

Because **Adapin** has an anticholinergic effect, it is contraindicated in patients with glaucoma or a tendency toward urinary retention.

Use of **Adapin** is contraindicated in patients who have been found hypersensitive to it.

WARNINGS

Usage in Pregnancy—Adapin has not been evaluated in pregnant patients. Therefore, it should not be used during pregnancy unless, in the judgment of the physician, it is essential to the welfare of the patient.

In animal reproduction studies of **Adapin (doxepin hydrochloride),** gross and microscopic examination of the offspring gave no evidence of drug-related teratogenic effect. Following doses of up to 25 mg./kg./day for 8 to 9 months, no changes were observed in the number of live births, litter size, or lactation. A decreased rate of conception was observed when male rats were given 25 mg./kg./day for prolonged periods—an effect which has occurred with other psychotropic drugs and has been attributed to drug effect on the central and/or autonomic nervous systems.

Usage in Children—The use of **Adapin** in children under 12 years of age is not recommended, because safe conditions for its use have not been established.

MAO Inhibitors—Serious side effects and even death have been reported following the concomitant use of certain drugs with MAO inhibitors. Therefore, MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with **Adapin.** The exact length of time may vary and is dependent upon the particular MAO inhibitor being used, the length of time it has been administered, and the dosage involved.

PRECAUTIONS

Drowsiness may occur with **Adapin;** therefore, patients should be warned of its possible occurrence and cautioned against driving a motor vehicle or operating hazardous machinery while taking the drug.

Patients should also be cautioned that the effects of alcoholic beverages may be increased.

Since suicide is an inherent risk in depressed patients and remains a risk through the initial phases of improvement, depressed patients should be closely supervised.

Although **Adapin** has shown effective tranquilizing activity, the possibility of activating or unmasking latent psychotic symptoms should be kept in mind.

Compounds structurally related to **Adapin** can block the effects of guanethidine and similarly acting compounds. However, at the usual clinical dosages, 75 mg. to 150 mg. per day, **Adapin** has been given concomitantly with guanethidine without blocking its antihypertensive effect. But at dosages of 300 mg. per day or higher, **Adapin** has exerted a significant blocking effect.

Adapin, like other structurally related psychotropic drugs, potentiates norepinephrine response in animals. But this effect has not been observed with **Adapin** in humans, which is in accord with the low incidence of tachycardia reported clinically.

ADVERSE REACTIONS

Anticholinergic Effects: Dry mouth, blurred vision and constipation have been reported. These are usually mild, and often subside as therapy is continued or dosage reduced.

Central Nervous System Effects: Drowsiness has been observed. It usually occurs early in the course of therapy and tends to subside as therapy continues. (See Dosage and Administration section.)

Cardiovascular Effects: Tachycardia and hypotension have been reported infrequently.

Other infrequently reported adverse effects include extrapyramidal symptoms, gastrointestinal reactions, secretory effects (such as increased sweating), weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash, and pruritus.

DOSAGE AND ADMINISTRATION

In most patients with mild to moderate anxiety and/or depression: 10 mg. to 25 mg. t.i.d. to start. A starting dosage of 10 mg. t.i.d. for a period of four days may reduce the initial drowsiness experienced by some patients, and may be tried in cases where drowsiness is clinically undesirable. Decrease or increase the dosage at appropriate intervals according to individual response. Usual optimum dosage is 75 mg. to 150 mg. per day.

In some patients with mild symptomatology or emotional symptoms accompanying organic disease, dosage as low as 25 mg. to 50 mg. per day has provided effective control.

In more severe anxiety and/or depression: 50 mg. t.i.d. may be required to start—if necessary, gradually increase to 300 mg. per day. Additional effectiveness is rarely obtained by exceeding 300 mg. per day.

Although optimal antidepressant response may not be evident for two to three weeks, antianxiety activity is rapidly apparent.

OVERDOSAGE

Symptoms—An increase of any of the reported adverse reactions, primarily excessive sedation and anticholinergic effects such as blurred vision and dry mouth. Other effects may be: pronounced tachycardia, hypotension and extrapyramidal symptoms.

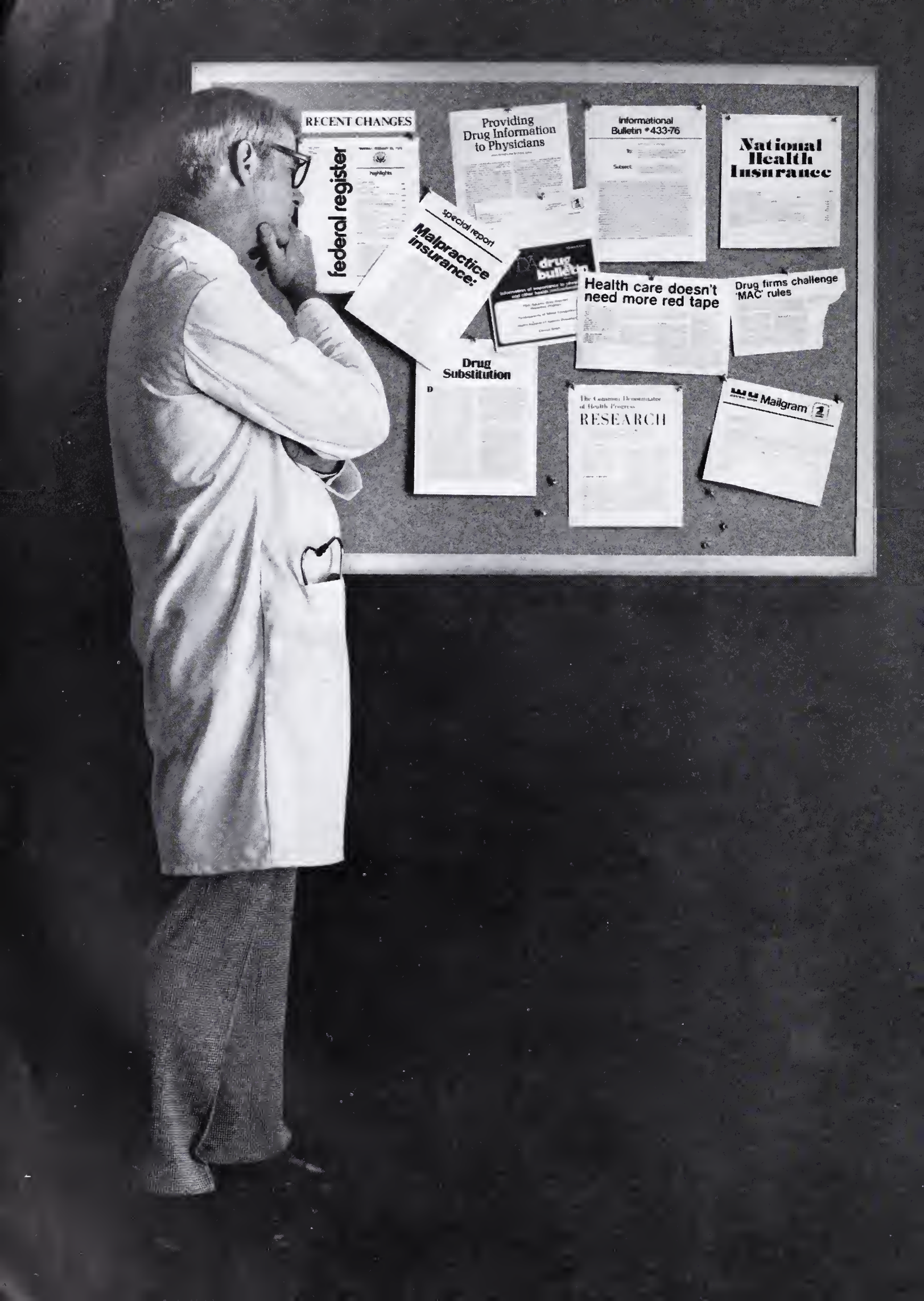
Treatment—Essentially symptomatic; supportive therapy in the case of hypotension and excessive sedation.

HOW SUPPLIED

Each capsule contains doxepin, as the hydrochloride, 10 mg. (NDC 0018-0356), 25 mg. (NDC 0018-0357), and 50 mg. (NDC 0018-0358) capsules in bottles of 100 and 1000.

PENNWALT

Pennwalt Prescription Products
Pharmaceutical Division
Pennwalt Corporation
Rochester, New York 14603


RECENT CHANGES
federal register
highlights
Providing Drug Information to Physicians
Informational Bulletin #433-76
Subject
National Health Insurance
special report
Malpractice insurance:
drug bulletin
Health care doesn't need more red tape
Drug firms challenge 'MAC' rules
Drug Substitution
The Common Denominator of Health Progress
RESEARCH
Mailgram

THERE ARE A LOT OF PEOPLE GETTING BETWEEN YOU AND YOUR PATIENT.

Medicine today is in the spotlight, subjected to all kinds of scrutiny. Your control over patient therapy is being monitored, judged and occasionally abrogated, sometimes by unknown third parties.

The worry is that in the wake of this focus, the relationship between you and your patient will be weakened, without offsetting benefits. Consider three examples:

Drug substitution In most states, pharmacy laws, regulations or professional custom stipulate that your non-generic prescriptions be filled with the precise products you prescribe. But in the last five years, a dozen or more State laws have been changed, permitting the pharmacist in most cases to select a product of the same generic drug to fill any prescription.

Ironically, this dilution of physician control has taken place against a background of growing evidence that purportedly equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA itself says it has not enforced the same standards for hundreds of "follow-on" products that it had applied to the original NDA approvals. Thus physician control over patient therapy is being eroded with a risk that patients may be exposed to drugs of uncertain quality.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant savings has been produced.

MAC Maximum Allowable Cost, MAC for short, is a Federal regulation designed to cut the Government's drug bill by setting price ceilings for drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the Government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right. Practicing doctors will have little to say about administration of the program, since Government will have absolute authority to make its choices stick.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to your patients: The cost of the research is more than ten times what it was, per product, in 1962; and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present approval process contributes to needless delay of needed therapy. That's why the increased efficiency of the drug approval process is vital to all our futures.

If these issues concern you, we suggest that you make your voice heard—among your colleagues and your representatives in State legislatures and in Washington.

It could make a difference in your practice tomorrow.

P·M·A
Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

Seminar on Human Sexuality For Physicians

Co-Directors
William H. Masters
Virginia E. Johnson

Dallas, April 22-23, 1977

Tuition: Physicians $160
Students, Interns & Residents $80
Spouse $80

For further information write
Reproductive Biology Research Foundation
4910 Forest Park Blvd. Drawer T
St. Louis, Mo. 63108

★

Specialized Service
IN
PROFESSIONAL LIABILITY INSURANCE
is a high mark of distinction

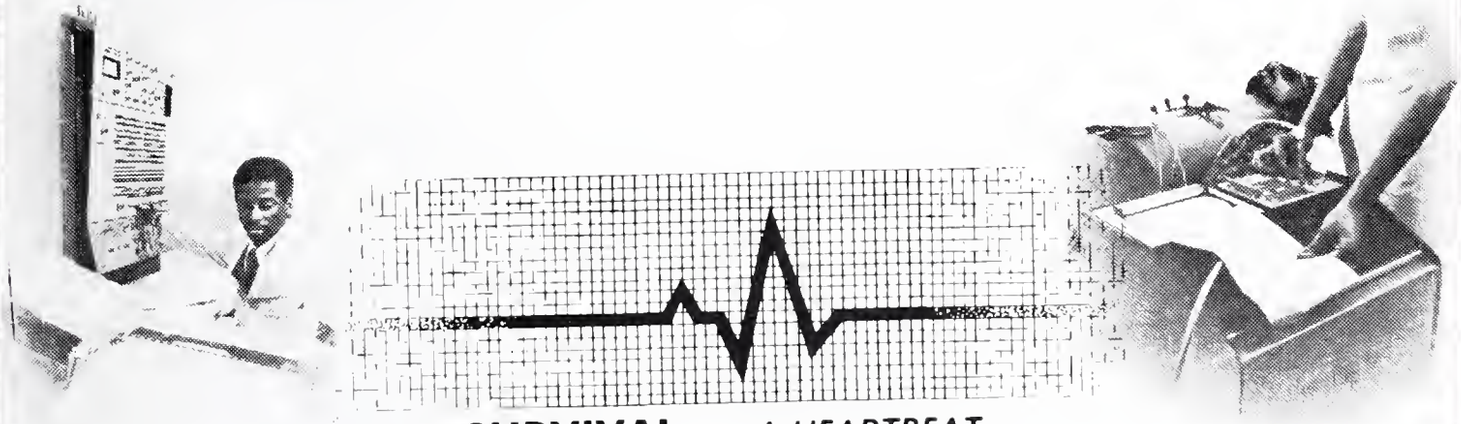
THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

TEXAS REPRESENTATIVES

A. F. Ennis, Jr. and B. C. Crim, Suite 210, 712 N. Washington, Dallas 75246 — Telephone (214) 821-4640
W. L. Kirk, 1508 Hermann Prof. Bldg., Houston 77030 — Telephone (713) 797-9835
M. C. Rollons, 408 GPM Bldg., South Tower, San Antonio 78216 — Telephone (512) 344-5901

CHROMALLOY
CRO-MED BIONICS DIVISION

The Chromalloy Pharmaceutical Company manufactures and distributes pharmaceutical products for both human and animal consumption. Distribution and manufacturing operations extend from Mexico throughout the U.S.A. and Canada. Continued emphasis on the development of new products for both human and veterinarian needs assures the finest products in the industry. Products are manufactured for more than fifty percent of well known pharmaceutical houses around the world; which in turn, market the products under their own private labels or brand names. Chromalloy Pharmaceutical is one of the largest suppliers of household deodorant and sanitary products in the world, retailed by variety stores, supermarkets, drug and department stores.



SURVIVAL — *A HEARTBEAT AWAY FROM COMPU-GRAM*™

Minutes may tip the scales — for survival

Time, in an emergency, is critical. Obsolete heart testing methods and equipment can be the difference between life and death. Using modern computers with medical programming, the COMPU-GRAM™ analyzes heart data with speed and reassuring accuracy. It improves patient care and is an invaluable extension for the harried physician.

Fully automated, more ECG's per day can be efficiently and accurately processed. This decreases physicians' required overreading time . . . by at least 50%. Moreover, there are significant personnel cost-saving benefits that ultimately pass to the patient. COMPU-GRAM™ round-the-clock assistance is "dial-tip" quick, every day of the year, every hour of the day.

- Improved patient care.
- More efficient hospital management.
- No capital equipment investment. *(That's good.)*
- Better utilization of existing hospital staff and facilities. *(That's even better.)*
- Marked reduction in hospital cost and timely accuracy. *(That's great!)*

For the clincher: COMPU-GRAM™ is the *only medically documented,* automated 3-channel Diagnostic ECG System available.
COMPU-GRAM™ was created by CRO-MED BIONICS, a division of Chromalloy American Corporation. It was developed over several years under the parental wing of The Mount Sinai Medical Center in New York.

Major hospitals in New York, Washington, Texas, Chicago, Los Angeles, St. Louis, London, Brussels, Paris, Madrid and Milan have evaluated and are utilizing this system today.

For additional information call collect or write:
CRO-MED BIONICS DIVISION, 160 Fifth Avenue,
New York, New York 10010, (212) 675-5520
Joe Breslin, Vice-Pres.

CHROMALLOY
A Corporate Family of Creative Companies

CRO-MED BIONICS DIVISION, 160 Fifth Avenue New York, New York 10010, (212) 675-5520

MEETINGS

M.D. ANDERSON HOSPITAL AND TUMOR INSTITUTE

The 30th Annual Symposium on Fundamental Cancer Research will examine the view of cancer as a disease in cell differentiation. The symposium, sponsored by UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute, takes place March 1-4, 1977, at the Shamrock Hilton Hotel, Houston. The main areas of discussion will include cellular differentiation in tumor cell origin and control of differentiation and neoplasia. Speakers will present thirty papers concerning germ cell differentiation, tissue differentiation and oncogenesis, immunogenesis and neoplasia, hematopoietic stem cells, molecular mechanisms of gene expression, gene expression in early development and cancer, and stability of differentiation. The registration fee is $45, which includes admission to meetings and cocktails and buffet. UT System Personnel are exempt from the registration fee for meetings, as are residents, fellows, interns and students from other universities and colleges. Tickets for the cocktails and buffet may be purchased for $20 by those exempt from the registration fee.

Contact: UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Texas Medical Center, Houston 77030.

VALLEY CHAPTER, TEXAS ACADEMY OF FAMILY PHYSICIANS

The Tenth Medical-Surgical Conference of the Rio Grande Valley takes place March 31-April 2, 1977, in McAllen, Tex. Among the guest speakers on the program are Ed Brandt, MD, Dean, UT Medical Branch, Galveston; Denton Cooley, MD, Cardiovascular Associates, Texas Heart Institute, Houston; Stanley E. Crawford, MD, Dean, UT Health Science Center, San Antonio and Michael M. Warren, MD, associate professor and chief, Division of Urology, UT Medical Branch, Galveston. B. Leslie Huffman, Jr, MD, president of the American Academy of Family Physicians, will give the keynote address. A Night in Old Mexico, South Texas Beef Barbeque, Saturday luncheon and Noche en McAllen will provide entertainment for physicians and spouses. Registration fee for the scientific program is $50. The program is acceptable for 16 prescribed hours by the American Academy of Family Physicians.

Contact: J. F. Fitch, MD, 817 Quince, McAllen, Tex 78501

CURRENT MEETINGS IN TEXAS

DALLAS SOUTHERN CLINICAL SOCIETY, 46th Annual Spring Clinical Conference, Dallas Hilton, Mar 28-30, 1977. Featuring general assemblies, scientific and technical exhibits, roundtable luncheons (medical, surgical, EENT, orthopedic, urological, pediatric, ob-gyn), dinner dance, postgraduate lectures, informal breakfast discussions, patient demonstrations. Registration fee, $75. Category 1, AMA Physician's Recognition award; 25 elective hours, AAFP. Contact: 3630 Noble Ave, Dallas 75204.

CURRENT NATIONAL MEETINGS

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, Fairmont Hotel, New Orleans, Mar 27-31, 1977. Presentations on anesthesiology, colon and rectal surgery, dermatology, family practice, gastroenterology, gynecology, internal medicine, neurology, obstetrics, ophthalmology, orthopedic surgery, otolaryngology, pathology, pediatrics, radiology, surgery, urology. Registration fee, $125; military courtesy registration fee, $62.50; students, residents, interns, fellows, complimentary registration. Contact: 1430 Tulane Ave, New Orleans 70112.

FEDERATION OF AMERICAN HOSPITALS, Annual Meeting, Hyatt Regency, Embarcadero Center, San Francisco, Mar 9-12, 1977. Keynote speaker: Milton Friedman, PhD, distinguished service professor of economics, University of Chicago, and 1976 Nobel Prize Winner in Economics. Pre-convention seminar: A Cooperative Approach to Living with Increasing Regulations, sponsored by Federation and United Hospital Association of California. Post-convention trip to Hawaii Mar 13-20. Trade show party Wednesday, Mar 9. Contact: Administrative Office, Box 2451, Little Rock, Ark 72203.

For other courses and symposiums, see Continuing Education Courses, pp 28-32.

MARCH

ALBUQUERQUE AND BERNALILLO COUNTY MEDICAL ASSOCIATION, Taos, NM, Mar 6-11, 1977. Thomas A Bodnar, Exec Dir, 2650 Yale Blvd SE #103, Albuquerque, NM 87106.

AMERICAN ACADEMY OF ALLERGY, New York, Mar 26-31, 1977. DL McNeil, Exec Dir, 225 E Michigan St, Milwaukee 53202.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Durango, Colo, Mar 18-19, 1977. 2650 Yale Blvd, SE, Suite 105, Albuquerque, NM 87106.

AMERICAN COLLEGE OF SURGEONS, Los Angeles, Mar 28-31, 1977. CR Hanlon, MD, Dir, 55 E Erie St, Chicago 60611.

AMERICAN MEDICAL ASSOCIATION NATIONAL CONFERENCE ON RURAL HEALTH, Seattle, Mar 30-Apr 1, 1977. AMA Department of Rural and Community Health, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL STUDENT ASSOCIATION, Chicago, Mar 30-Apr 3, 1977. LR Giancola, Exec Dir, 1171 Tower Rd, Schaumburg, Ill 60195.

AMERICAN PSYCHOSOMATIC SOCIETY, Atlanta, Mar 25-27, 1977. 265 Nassau Rd, Roosevelt, NY 11575.

■ AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS, Dallas, Mar 23-25, 1977. Mrs Elaine Galasso, Exec Sec, 1718 Gallagher Rd, Norristown, Pa 19401.

ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL INSTRUMENTATION, San Francisco, Mar 13-17, 1977. 1901 N Ft Myer Dr, Suite 602, Arlington, Va 22209.

■ DALLAS SOUTHERN CLINICAL SOCIETY, Dallas, Mar 28-30, 1977. Robert L Heath, Exec Officer, 3630 Noble Ave, Dallas 75204.

NATIONAL CONFERENCE ON RURAL HEALTH, Seattle, Mar 30-Apr 1, 1977. American Medical Association, 535 N Dearborn St, Chicago 60610.

NEW MEXICO CHAPTER, AMERICAN ACADEMY OF FAMILY PHYSICIANS, Durango, Colo, Mar 18-19, 1977. Albuquerque Academy of Family Physicians, 2650 Yale Blvd SE, Suite 105, Albuquerque, NM 87106.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, New Orleans, Mar 28-31, 1977. 1430 Tulane Ave, New Orleans 70112.

■ SOCIETY OF NUCLEAR MEDICINE, SOUTHWEST CHAPTER, El Paso, Tex, Mar 18-20, 1977. RJ Gorten, MD, 915 Strand, Galveston, Tex 77550.

SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, Little Rock, Ark, Mar 16-18, 1977. Exec Sec, 4300 N Lamar Blvd, Austin, Tex 78756.

■ TEXAS ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Houston, Mar 4-5, 1977. Iris Wenzel, 1801 N Lamar, Austin, Tex 78701.

■ TEXAS DEPARTMENT OF HEALTH RESOURCES, Annual Southwest Conference on Diseases in Nature Transmissible to Man, Austin, Tex, Mar 10-11, 1977. 1100 W 49th St, Austin, Tex 78756.

■ TEXAS RADIOLOGICAL SOCIETY, Dallas, Mar 17-19, 1977. Iris Wenzel, 1801 N Lamar, Austin, Tex 78701.

■ UT SYSTEM MD ANDERSON HOSPITAL AND TUMOR INSTITUTE, Symposium on Fundamental Cancer Research, Houston, Mar 2-4, 1977. Stephen C Stuyck, MD, MD Anderson Hospital and Tumor Institute, Houston 77030.

■ VALLEY CHAPTER, TEXAS ACADEMY OF FAMILY PHYSICIANS, McAllen, Tex, Mar 31-Apr 2, 1977. CE Barrera, MD, 606 S Broadway, McAllen, Tex 78501.

APRIL

AMERICAN ACADEMY OF PEDIATRICS, New Orleans, Apr 16-20, 1977. Department of Communications, 1801 Hinman Ave, Evanston, Ill 60204.

AMERICAN ACADEMY OF NEUROLOGY, Atlanta, Apr 25-30, 1977. Stanley A Nelson, Exec Dir, 4015 W 65th, Suite 302A, Minneapolis 55435.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Toronto, Apr 18-20, 1977. WT Maloney, 6 Beacon St, Suite 620, Boston 02108.

AMERICAN COLLEGE HEALTH ASSOCIATION, Philadelphia, Apr 19-22, 1977. James W Dilley, Exec Dir, 2807 Central, Evanston, Ill 60201.

■ AMERICAN COLLEGE OF PHYSICIANS, Dallas, Apr 18-21, 1977. EC Rosenow, Exec Vice-pres, 4200 Pine St, Philadelphia 19104.

■ AMERICAN COLLEGE OF RADIOLOGY, Houston, Apr 17-22, 1977. WC Stronach, Exec Dir, 20 N Wacker Dr, Chicago 60606.

AMERICAN GERIATRICS SOCIETY, San Francisco, Apr 13-14, 1977. 10 Columbus Circle, New York 10019.

AMERICAN OCCUPATIONAL MEDICAL ASSOCIATION, Boston, Apr 24-28, 1977. Howard N Schulz, Exec Dir, 150 N Wacker Dr, Chicago 60606.

AMERICAN PEDIATRIC SOCIETY, San Francisco, Apr 25-29, 1977. David Goldring, MD, Sec, 500 S Kingshighway, St Louis 63110.

AMERICAN UROLOGICAL ASSOCIATION, INC, Chicago, Apr 24-28, 1977. Richard J Hannigan, Exec Officer, 1120 N Charles St, Baltimore 21201.

ARKANSAS MEDICAL SOCIETY, Little Rock, Apr 24-27, 1977. CC Long, MD, Exec Vice-pres, 214 N 12th, Box 1208, Fort Smith, Ark 72901.

■ CHILDREN'S HOSPITAL, SANTA ROSA MEDICAL CENTER, Location to be announced, Apr 30-May 1, 1977. Howard A Britton, Medical Director, Children's Hospital, Santa Rosa Medical Center, San Antonio, Tex 78285.

SOCIETY OF TEACHERS OF FAMILY MEDICINE, New Orleans, Apr 17-20, 1977. Ms PL Plhak, Exec Dir, 1740 W 92nd St, Kansas City, Mo 64114.

SOUTHEASTERN SURGICAL CONGRESS, Bal Harbour, Fla, Apr 3-7, 1977. AH Letton, MD, Sec-Dir, 315 Boulevard NE, Suite 500, Atlanta 30312.

■ SOUTHWEST ALLERGY FORUM, Lakeway Inn, Austin, Tex, Apr 30-May 4, 1977. Theo S Painter, Jr, MD, Suite 107, Medical Park Tower, Austin, Tex 78705.

■ ST LUKE'S EPISCOPAL HOSPITAL/BAYLOR COLLEGE OF MEDICINE, 13th Annual Orthopedic Symposium, Houston, Apr 1-2, 1977. Alexander E Brodsky, MD, 505 Medical Towers Bldg, Houston 77025.

■ TEXAS SOCIETY OF CHILD PSYCHIATRY, San Antonio, Tex, Apr 1-2, 1977. Alberto C Serrano, MD, Pres, 2135 Babcock Rd, San Antonio, Tex 78229.

■ TEXAS STATE BOARD OF EXAMINERS IN THE BASIC SCIENCES, Locations to be announced, Apr 1-2, 1977. Exec Sec, 319 Sam Houston State Office Bldg, Austin, Tex 78701.

■ TEXAS SURGICAL SOCIETY, Galveston, Tex, April, 1977. Robb H Rutledge, Sec, 901 S Lake St, Fort Worth, Tex 76104.

■ TEXAS UROLOGIC SOCIETY, Laredo, Tex, Apr 15-16, 1977. Carlos H Mata, MD, Sec-Treas, 1012 Santa Ursula, Laredo, Tex 78040.

■ TRAVIS CLINIC FOUNDATION, Jacksonville, Tex, April, 1977. James H Pesnell, Box 870, Jacksonville, Tex 75766.

MAY

■ AMERICAN MEDICAL STUDENT ASSOCIATION-UT MEDICAL BRANCH NATIONAL STUDENT RESEARCH FORUM, Galveston, Tex, May 4-7, 1977. Room 209, Libbie Moody Thompson Basic Sciences Building, UT Medical Branch, Galveston, Tex 77550.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, San Antonio, Tex, May 19-22, 1977. Geraldine Midgley, Box 1287, Uvalde, Tex 78801.

ASSOCIATION FOR THE CARE OF CHILDEN IN HOSPITALS, Dearborn, Mich, May 25-28, 1977. Mary Frances Podolak, RN, Childrens Hospital of Michigan, 3901 Beaubien Blvd, Detroit, Mich 48201.

INDIANA CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, Indianapolis, May 11-14, 1977. David Gettle, MD, 10005 Hillsdale, Carmel, Ind 46032.

■ NORTH TEXAS CHAPTER, AMERICAN COLLEGE OF SURGEONS, Dallas, May, 1977. Felix P Peppard, MD, FACS, Sec-Treas, 3600 Gaston, Dallas 75246.

SOCIETY OF TEACHERS OF FAMILY MEDICINE, Atlanta, May 2-4, 1977. 1740 W 92nd St, Kansas City, Mo 64114.

■ TEXAS AIR-MEDICS ASSOCIATION, Houston, May 12, 1977. CF Miller, MD, Box 1338, Waco, Tex 76703.

■ TEXAS DERMATOLOGICAL SOCIETY, Houston, May 14-15, 1977. William F Spiller, MD, Sec, 5000 Montrose, Houston 77006.

■ TEXAS DIABETES ASSOCIATION, Houston, May 13, 1977. Eric A Orzeck, MD, 7800 Fannin, Houston 77054.

■ **TEXAS MEDICAL ASSOCIATION, Annual Session, Houston, May 11-15, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.**

■ TEXAS OCCUPATIONAL MEDICAL ASSOCIATION, Houston, May 12, 1977. Frank J Kelly, MD, Box 647, Amarillo, Tex 79604.

■ TEXAS OPHTHALMOLOGICAL ASSOCIATION, Houston, May, 1977. CA Struve, MD, Pres-elect, Box 6374, Corpus Christi, Tex 78411.

JUNE

■ TEXAS HEART INSTITUTE, Houston, Jun 2-4, 1977. Mrs Verna Dewees, Sec to Medical Director, Box 20269, Houston 77025.

AMERICAN MEDICAL ASSOCIATION, Annual Convention, San Francisco, Jun 18-23, 1977. James H Sammons, MD, Exec Vice-pres, 535 N Dearborn St, Chicago 60610.

INTERNATIONAL CONGRESS OF RHEUMATOLOGY, San Francisco, Jun 26-Jul 1, 1977. 9650 Rockville Pike, Bethesda, Md 20014.

ROCKY MOUNTAIN NEUROSURGICAL SOCIETY, INC, Lake Tahoe, Nev, Jun 8-12, 1977. Richard H Moiel, MD, Sec, 601 Medical Towers, 1709 Dryden St, Houston 77030.

JULY

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Mescalero, NM, Jul 18-21, 1977. Bob Reid, Convention Dir, Box 456, Sunland Park, NM 88063.

FLORIDA CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, 1977 Clinical Conference on Pre-Hospital Emergency Care, Orlando, Fla, Jul 8-10, 1977. Registrar, 600 Courtland St, Suite 420, Orlando, Fla 32804.

AUGUST

ASPEN MUSHROOM CONFERENCE, Aspen, Colo, Aug 7-12, 1977. Aspen Mushroom Conference, c/o Beth Israel Hospital, 1601 Lowell Blvd, Denver 80204.

INTERNATIONAL CONFERENCE ON MEDICAL COMPUTING, Toronto, Aug 8-13, 1977. Department of Computer Systems in Medicine, American Medical Association, 535 N Dearborn St, Chicago 60611.

Does the sound of malpractice make you ill?

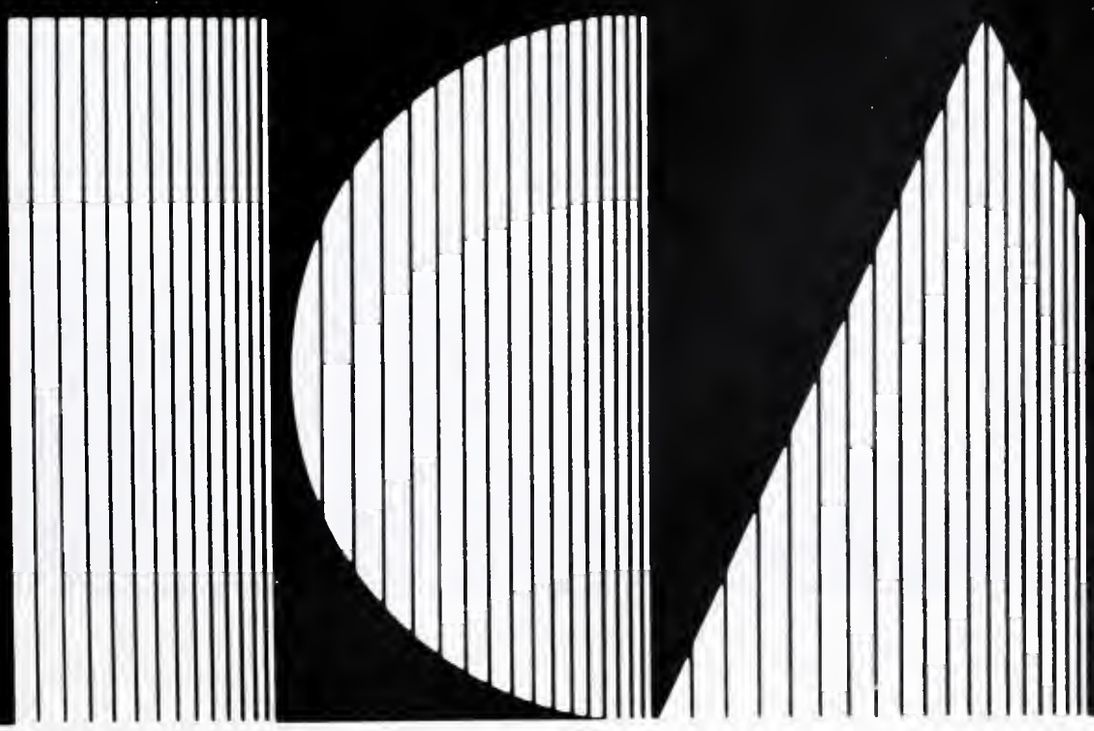
Improper insurance coverage for malpractice suits, or the burden of enormous insurance premiums can also cause financial illness.

And because of this very serious reality, Insurance Corporation of America, a multi-million dollar admitted asset carrier, now offers realistic coverage for the Texas physician and surgeon. This coverage includes vigorous defense against spurious claims and prevents needless out-of-court malpractice settlements.

ICA is made up of lawyers, doctors and insurance experts who understand your professional liability needs and have provided an answer. ICA offers only non-assessable, "occurrence" policies with your rate based on local, not national or even statewide experience.

There's more to learn about ICA, and protecting yourself from needless malpractice worries. Call our 24 hour number, 1-713-526-4863 for the name of the ICA agent nearest you.

We know your concern is practicing medicine, and our concern is protecting your practice.



A+AAAAA Reinsurance Protection — Government Excess Insurance Available.

contains no aspirin

tablets

Darvocet-N® 100

100 mg. Darvon-N® (propoxyphene napsylate)
650 mg. acetaminophen

Lilly

Additional information available to the profession on request from Eli Lilly and Company Indianapolis, Indiana 46206

700184

Eli Lilly and Company, Inc.
Carolina, Puerto Rico 00630

Nursing bottle syndrome

Richard L. Trippie, DDS; Richard E. Jennings, DDS

Nursing bottle syndrome (bottle caries) is a type of rapid tooth decay, seen in young children, with a definite pattern of distribution. The physician has a superb opportunity to diagnose and prevent this disease.

Physicians can play a significant role in the prevention of dental disease by recognizing and preventing the nursing bottle syndrome, or bottle caries. Bottle caries is a type of tooth decay seen in young children who use a nursing bottle containing milk, fruit juices, or other carbohydrate-containing liquids, too often and too long. Since most children do not visit a dentist for the first time until they are about three years old, it is difficult for dentists to prevent this type of tooth decay.

The destructive effects of sucrose-containing pacifiers on children's teeth has been recognized for many years. Jacobic,[1] an early pediatrician, saw this destruction in his patients who used water (or milk) and sugar in a "bag" which the infant held in his mouth. Fass[2] noted many young children with a similar type of tooth decay who also had similar feeding habits. He found that most severely decayed teeth were the maxillary incisors, followed in order by maxillary first primary molars, maxillary primary cuspids, and the mandibular first primary molars. The mandibular incisors and the primary second molars were seldom affected. Feeding habits of these children were identical in that they all had access to a nursing bottle at naptime and bedtime, and all continued use of the nursing bottle beyond the normal weaning time of 10 to 12 months of age. The longer the child has been taking the bottle, the more severe seemed the destruction of his dentition. Milk, juices, tea, punch, sugar-water, and honey were the most commonly used items in these bedtime bottles. Since Fass' article was published, many other authors have corroborated his findings.[3-6]

Normal routine feeding is not being criticized. Abnormal feeding habits resulting in hours' long exposures of the teeth to milk is documented as being a cause of bottle caries. The addition of freely fermentable carbohydrates such as sugar, honey, etcetera, to the fluid in the nursing bottle may further enhance the damage to teeth produced by this syndrome.

The most widely accepted theory of dental caries formation suggests that the bacterial breakdown of dietary carbohydrates retained in non-self-cleansing areas of the dentition produced acid which then dissolves the underlying tooth enamel, thus producing the carious lesion. It has also been shown that carbohydrates which are cleared slowly from the oral cavity favor caries initiation.[7] A decrease in the rate of salivary flow and secretion may also result in a greater amount of tooth decay.[8]

When a child is allowed a bottle at naptime or bedtime, he is usually lying down with the nipple in his mouth. The nipple is held against the palate and the muscle of the tongue is in a forward position and covers the lower incisors. As long as the child is awake, he is swallowing to clear his mouth and salivating at the normal rate; but as he becomes drowsy, salivary flow and the frequency of swallowing decreases. This creates a pooling of the bottle's liquid around all the teeth except the mandibular incisors. This carbohydrate liquid is retained against the teeth in the presence of acid-forming microorganisms and the acid attack on the teeth begins. Decreased frequency of swallowing during sleep and the decrease in salivary flow allow this

carbohydrate contact to continue for the duration of the sleeping period. Greater damage is seen in maxillary teeth because the tongue protects the mandibular teeth.

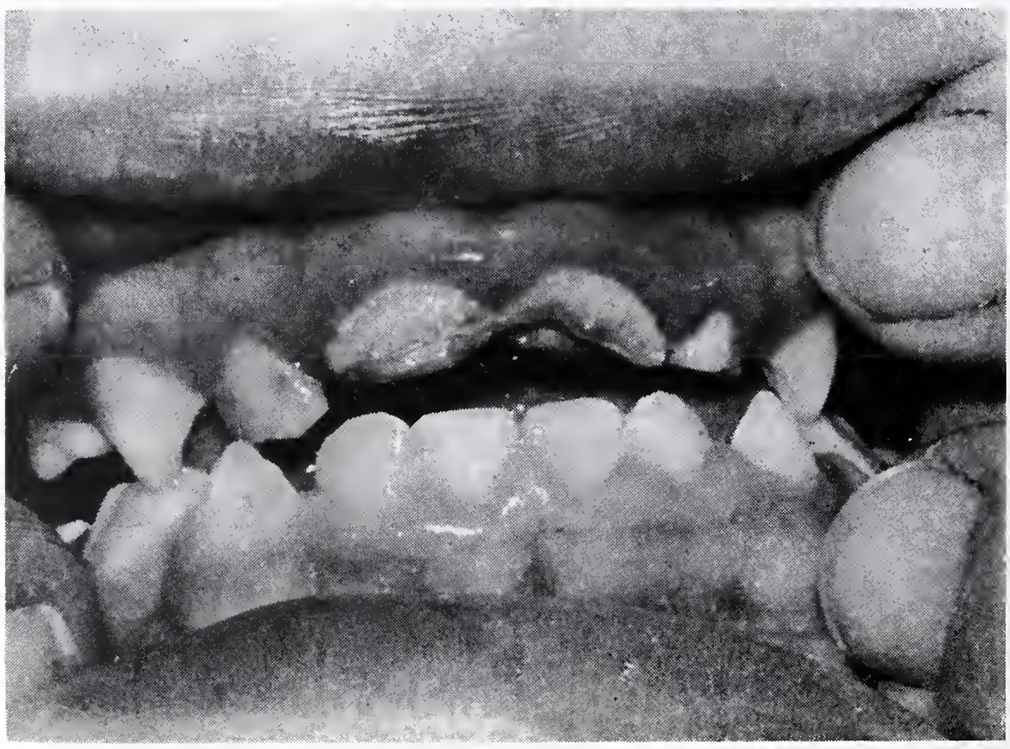
Because many of these children are too young to clearly verbalize their discomfort, the parent may become aware of the problem only after extensive damage has occurred. Many parents report to the dentist that the child fell, and while checking for tooth injury they noticed something wrong with the child's teeth. Other parents may notice "stains" on the child's teeth. Still others become aware that the child seems to prefer soft foods, or that he grimaces when chewing cold, sweet, or hard foods. Unfortunately, many parents do not become aware of the problem until the child's teeth are extensively damaged.

Case Histories

Case 1: The patient is a 2-year-old boy with no known medical problems. Pregnancy and neonatal periods were uneventful. There are no siblings. Upon oral examination the caries pattern was characteristic of bottle caries, with the maxillary incisors being the most severely affected. The mother said that the child was still taking a nursing bottle filled with canned fruit drink to bed at night. The teeth were restored with stainless steel crowns (Fig 1).

Case 2: The patient is a 23-month-old boy with a normal medical history. There was one sibling who had a mild tooth decay rate. The patient presented with pain of several days' duration. Examination showed that the maxillary incisors were

1a. The difference in the condition of the maxillary and the mandibular incisors, as shown, is the most characteristic feature of bottle caries.



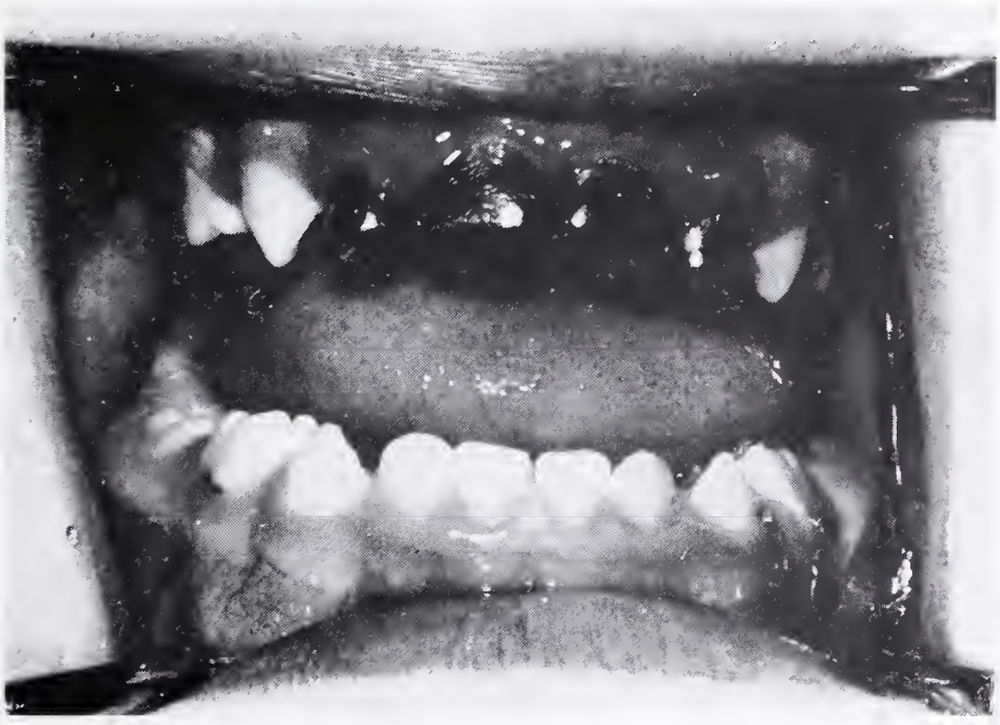
severely decayed, and periapical abscesses were present. The first primary molars also had carious lesions. The mother said that the child took the bottle to bed each night and also carried a nursing bottle of "root beer" with him during the day. Treatment involved the extraction of the maxillary incisors and the restoration of the first molars with silver dental fillings (Fig 2).

The method of restoration of teeth with this pattern of decay varies with the degree of damage found. Small cavities can be restored with silver or plastic fillings, and the more severely damaged teeth will need crowns or caps. Many times the destruction is so extensive that extraction of the teeth is the only possible treatment. Treatment of these teeth can occasionally be done in the dental office. Most often, because of the child's age and the extensive treatment needed, it is best to do the child's work in the hospital operating room utilizing general anesthesia. Many times the work is completed in the morning, and the child can be dismissed the same day.

Another problem with nursing bottle syndrome (bottle caries) is the parents' reactions to this diagnosis. They often display feelings of anxiety and guilt, and often they ask, "Why didn't anyone tell me this might happen?"

The physician who sees the expectant mother and then follows the infant's progress has an opportunity that a dentist does not have: to inform the expectant mother of the value of good feeding habits and to reinforce this information during regularly scheduled infant examination appoint-

1b. These teeth have been restored with stainless steel crowns.



ments. Printed information about bottle caries is available to give to parents when they visit your office. ("Nursing Bottle Mouth" is available from the Order Section, American Dental Association, 211 E Chicago Ave, Chicago, IL 60611. Prices are $1.15 for minimum 25 copies, $4.20 for 100 copies, and $20.05 for 500 copies.)

Summary

Nursing bottle syndrome is characterized by rapid decay of the following primary teeth: maxillary incisors, maxillary cuspids, and mandibular first molars. The mandibular incisors are rarely involved.

This type of caries is seen in infants who use a nursing bottle at naptime or bedtime after they are 10 to 12 months old.

The physician has an excellent opportunity to inform parents of this syndrome early in the infant's life, and thereby prevent damage to the infant's teeth.

References

1. Jacobic A: Dentition and its derangements, course of lectures delivered in New York Medical College. New York, Bailliere Brothers, VII, 172, p 19 cm, 1862.

2. Fass E: Is bottle feeding a factor in dental caries? J Dent Child 24:245-251, 1962.

3. Golnick AS, Mathewson RJ: Nursing bottle syndrome—more can be done. J Michigan Dent Assn 49:261-264, 1967.

4. Goose DH: Infant feeding and caries of the incisors; an epidemiological approach. Caries Res 1:167-183, 1967.

5. Kroll RG, Stone JH: Nocturnal bottle feeding as a contributory cause of rampant dental caries in the infant and young child. J Dent Child 34:454-459, 1967.

6. Michal BC: "Bottle mouth" caries. J Louis Dent Assn 27:10-16, 1969.

2a. Destruction of this child's teeth is so severe that surgical removal is the only treatment possible. Abscess formation and draining sinuses, which occur with abscessed teeth, are seen as two gumboils.

7. Lundquist C: Oral sugar clearance, its influence on dental caries activity. Odont Rev 33:suppl 1, 1952.
8. Schneyer LH, Levin LK: Rate of secretion by individual salivary gland pairs of man under conditions of reduced exogenous stimulation. J Appl Physiol 7:508-512, 1955.

Dr Trippie, Clinical Instructor, Preventive Dental Medicine, Pedodontics, The University of Texas Dental Branch, PO Box 20068, Houston, TX 77025.

Dr Jennings, Professor and Chairman, Preventive Dental Medicine, Pedodontics, The University of Texas Dental Branch, Houston, TX 77025.

2b. In the same patient, the mandibular incisors are unaffected.

The physician's role in reducing patient exposure to sucrose

Ira L. Shannon, DMD, MSD; Eleanor J. Edmonds, BS

Sucrose and glucose determinations were carried out in several groups of products, the use of many of which is under control of the physician. Products included 30 chewable tablets and vitamin drops, 37 different brands of cough syrups, 24 cough drops and lozenges, 29 commercial baby food desserts, and commercial and home-prepared infant formulas. The sucrose and glucose values for these products are listed.

Sucrose is an extremely dangerous fermentable carbohydrate from the dental point of view. Both frequency of exposure, particularly between meals, and retentive food forms (sticky caramels), are critical factors in decay initiation. Evidence is also accumulating that actual sucrose concentration is significant.

Physicians may unwittingly contribute to dental decay by recommending products that not only bring about needless exposures to sucrose, but also contain inordinately high concentrations of this highly refined industrial product. The tabulated data in this report provide the physician with a choice of products upon which he can base his recommendations.

In our society it is now appropriate to classify dental decay as a disease of choice. The addition of fluoride to a communal water supply that is deficient in this element can be expected to provide a 50-70% reduction in the incidence of caries, and the topical application of fluorides, either in the office, in school rinsing or brushing programs, or in home care programs where treatment is self-administered, will provide a high level of additional protection. All such treatment is directed toward increasing the resistance of the teeth to demineralization, and completely ignores one crucial requisite of the caries process—the provision of dietary fermentable carbohydrate as a source for production of acid through microbial metabolic processes.

Incontrovertible evidence accumulated during the past three decades firmly establishes the detrimental role of fermentable carbohydrates in the initiation and progression of dental caries, one of the world's most costly and uncontrolled diseases. Of these carbohydrates, the disaccharide, sucrose, common table sugar, is the prime offender and has been appropriately classified as the archcriminal in the decay process.[1] Microorganisms in the oral cavity, primarily streptococci, synthesize extracellular polysaccharides from sucrose and, in turn, these polysaccharides provide a means for bacterial attachment to the tooth surface. Dental plaque, literally swarming with acidogenic bacteria, forms and the carious process begins.

Dental professionals agree that controlling the frequency of exposure of the teeth to sucrose is crucial if dental caries is to be controlled.[2-5] Yet dentally harmful sugar-containing items of all sorts continue to be consumed at an alarming and unprecedented rate, more often as snacks between meals than at regular mealtimes. These between-meal exposures to sugar are particularly damaging to the dentition.

In a recent three-year nutritional survey of 1,434 patients at The University of Texas Dental Branch at Houston,[6] it was revealed that 95% of the patients snacked between meals, 80% doing so once or twice daily, and more than 15% snacked three or more times daily. The listed snacks (by definition anything ingested between regular meals) encompassed a wide

variety of items and the majority contained high levels of harmful fermentable carbohydrate. Only 2 of the 17 most popular selections, fresh fruit and milk, could be adjudged safe for dental health. Significantly, the potential dental hazards of many other snacks went completely unrecognized by the users.

The results of this nutritional survey, coupled with the disturbing fact that it is virtually impossible to ascertain a commercial product's sugar content from its label, prompted a study in which more than 1,000 frequently ingested foods and drinks were analyzed for sucrose and glucose content. Earlier publications have reported the results for 129 candies, 103 cookies, 32 mints, 29 diet soft drinks, 23 cheeses, 39 fresh fruits and vegetables, 46 luncheon meats, 69 crackers and wafers, 71 breads, 78 breakfast cereals, and 58 unclassified snack foods.[7-9]

Our report deals with materials that are not customarily considered as snacks. Nonetheless, most are usually consumed between meals and, significantly, use of many of these materials is under the direct control of the physician. Depending on the sugar concentration and frequency of use, certain of these chewable tablets and vitamin drops, cough syrups, cough drops and throat lozenges, infant formulas, and baby food desserts, can be distinct threats to a healthy dentition.

Materials and Methods

Thirty-seven cough syrups, 24 cough drops and lozenges, 30 chewable tablets and vitamin drops, 29 baby food desserts, and 14 infant formulas were purchased at local retail outlets. Five "home-prepared" infant formula recipes were mixed in the laboratory. Details on the preparation of samples for analytical processing have been presented previously.[9] The samples were analyzed for both sucrose and glucose concentration by a double enzyme (glucose oxidase-invertase) procedure described in our previous reports.[8,9] As the primary step in this method, the glucose content of each sample was determined by the highly specific glucose oxidase procedure.[10,11] Another aliquot of each sample was reacted with invertase, this converting available sucrose to fructose and glucose. A second glucose analysis was then carried out and the difference between the initial and second glucose measurements permitted the estimation of the sucrose content of the test material. Duplicate analyses were performed in all instances.

Results

The sucrose and glucose content of 30 chewable tablets and vitamin drops are listed in groups according to manufacturer in Fig 1. Fifty percent of the analyzed products contained sucrose. Individual values ranged from 0 to 55.9% sucrose. Thirty-three percent of the values fell between 11% and 50%; 63% contained 10% or less sucrose; 50% were sucrose-free. The overall mean sucrose concentration was 13.2% (SD=15.7), with a range from 0 to 51.7%.

Fig 2 lists results from 37 different brands of cough syrups. Sucrose values ranged from 0 to 44.1% with a mean of 17.2% (SD=13.4). Sixty-eight percent of the products contained over 10% sucrose; 49% contained more than 20% sucrose in their formulation. Only 8 of the 37 products were sucrose-free. Glucose values

ranged from 0 to 28.5% with a mean of 9.4% (SD=7.6).

The highest concentrations of sucrose and glucose were found in cough drops and throat lozenges and are listed in Fig 3. Of the 24 products, only 3 contained less than 10% sucrose; 2 additional ones contained 22.0 and 21.3% sucrose, and 54% of the samples contained between 40 and 60% sucrose. One-fourth of them contained more than 60% sucrose, and 2 were found to contain more than 68% sucrose. The average sucrose content was 47.2% (SD=20.9). Glucose values ranged from 0 to 16.3% with a mean of 8.3% (SD=4.0).

Only 2 of the 29 baby food desserts contained over 10% sucrose. The sucrose values ranged from 0.5 to 13.5% with a mean of 6.2% (SD=2.9). Glucose concentrations were relatively low also, ranging from 0.2% to 12.7% with a mean of 4.5% (SD=3.6). Individual values are reported in Fig 4.

Values on infant formulas appear in Fig 5. Whether commercially prepared or made at home, most infant formulas contained small amounts of sucrose or glucose or both. One of the 14 manufactured formulas contained more than 5% sucrose. Four products contained no sucrose at all. The average sucrose value for all commercial formulas was 2.1% (SD=2.1). Home formulas contained even less sucrose.Glucose values were minimal, ranging from 0 to 0.8%.

Discussion

Animal experiments have demonstrated that caries incidence increases proportionately as dietary carbohydrate increases,[12] and that diets with sucrose levels between 2 and 10% can induce caries activity.[13-16]

1. Sucrose and glucose content of chewable tablets and vitamin drops.

Product	Sucrose (%)	Glucose (%)
Abbott Laboratories		
Children's Chewable Aluminum Aspirin Tablet	0.0	0.0
Miles Laboratory		
Chewable Chocks	55.9	1.0
Stur-Dee Health Products, Inc		
Chewable Vitamin-E Complex	41.7	1.0
Cheri-Dol Dolomite-Cherry Tablets	39.2	0.0
Tasty-Yeast (Brewer's Yeast)	0.0	39.8
Bone Meal Wafers	0.0	51.7
B-Complex	0.0	43.6
Rugby Laboratories, Inc		
Chew-E	0.0	0.0
Poly-Vitamins Tablets	49.1	0.0
Children's Chewable Vitamins	5.3	1.0
Vita-Flor Tablets	0.0	3.6
Poly-Vitamin Fluoride Tablets	4.3	34.4
Chewable Yeast Tablets	13.2	9.6
Deca-Vite Drops	3.4	1.5
Tri-Vitamin Drops	0.0	0.0
Poly Vitamin Drops	0.0	0.7
Chewable Vitamin E Tablets	48.8	8.2
Chewable Vitamin C Tablets	0.0	4.4
Upjohn Company		
Adeflor Chewable Tablets (Vit)	0.0	0.0
Ayerst Laboratories, Inc		
Clusivol Multivitamin Chew Tablets	0.0	28.2
Riopan Antacid Chewable Tablets	12.7	16.2
Ross Laboratories		
Vi-Daylin Tablets	26.3	24.5
Vi-Daylin with Fluoride Tablets	22.2	29.3
Vi-Daylin Fluoride Drops	0.0	1.1
Mead Johnson		
Poly-Vi-Flor Tablets	44.1	25.2
Poly-Vi-Sol Drops	0.0	1.0
Poly-Vi-Sol Vitamin Tablets	21.0	23.9
Tri-Vi-Sol Drops	0.0	0.0
USV Pharmaceutical Corp		
Fluorac-Multivitamins with fluoride tablets	7.8	0.0
Hoyt Laboratories		
Chewable Phos-Flur Tablets (no vitamins)	0.0	0.0

2. Sucrose and glucose content of cough syrups.

Product	Sucrose (%)	Glucose (%)
A. H. Robins		
Robitussin CF	0.7	16.7
Robitussin PE	0.0	19.0
Robitussin	3.3	18.0
Cheesebrough-Ponds		
Pertussin - 8 Hr	29.4	0.1
Pertussin Wild Berry	28.3	0.0
Vicks		
Vicks Formula 44	20.1	12.8
Vicks Formula 44-D	0.0	0.0
Sauter Labs		
Romilar CF - 8 Hour	14.3	4.7
Children's Romilar	24.2	11.1
Dorsey Laboratories		
Triaminicol	38.4	3.8
Dorcol Pediatric	11.1	18.7
Upjohn		
Orthoxicol	44.1	0.0
Cheracol D	22.8	7.4
Pharmacroft		
Coldene Adult Strength	28.7	0.0
Coldene Children's Formula	24.1	0.7
Mead Johnson		
Trind DM	22.9	4.2
Schering Corp		
Coricidin	26.6	10.3
Parke-Davis		
Cosanyl DM	11.7	13.8
Benylin Cough	33.4	4.4
Smith-Kline & French Laboratories		
Ornacol	0.0	0.0
Dow		
2 G/DM Expectorant	22.2	4.8
Walgreen		
Decongestant Cough Syrup	18.7	12.8
St. Joseph		
St. Joseph Cough Syrup	40.6	4.6
Thompson Cough Syrup	20.8	12.1
Dewitt's Baby Cough Syrup	24.6	14.4
Glenbrook Labs		
Breacol with Neo-Synephrine	0.0	14.7
Abbott		
Quelidrine	33.6	10.2
Merrell		
Consotuss	0.0	12.4
Clinic Drugs Distributor		
Recodene D	18.5	11.6
Bristol Myers		
Congespirin for Children	26.9	16.6
Henry K. Wampole		
Creo-terpin	5.4	6.6
Creomulsion Co		
Creomulsion	3.7	19.9
Bristol Myers		
Silence is Golden	11.9	22.0
Truett Labs		
Radan Jr.	0.0	28.5
Coryban D	0.0	0.0
Depree		
Baby Cough Syrup	25.9	12.5
Block Drug		
Romilan III with Epellin	0.0	0.0

Exposure to sucrose

3. Sucrose and glucose content of cough drops and lozenges.

Product	Sucrose (%)	Glucose (%)
Vicks		
Vicks Medicated Cough Drops Regular Flavor	3.2	10.3
Vicks Medicated Cough Drops Wild Cherry	2.5	12.3
Victors Menthol-Eucalyptus	53.2	8.6
Vicks Medicated Cough Drops True Lemon Flavor	0.0	13.8
Vicks Cough Silencers	22.0	8.5
Vicks Medicating Throat Lozenges	66.2	0.0
Luden's		
Luden's Menthol	56.7	8.3
Luden's Wild Cherry	46.6	11.2
Luden's Menthol Eucalyptus	49.3	9.4
Calgon Consumer Products Co		
Sucrets - Sore Throat Lozenges	53.2	8.9
Hold - 4 Hour Cough Suppressant	62.4	8.9
Sucrets - Cough Control	54.5	10.8
Sucrets - Sore Throat Lozenges - Children	58.9	16.3
Warner-Lambert		
Hall's with vapor action	62.9	9.7
Listerine - Regular Flavor	68.9	5.4
Listerine - Lemon Mint	68.2	7.6
Listerine - Children Cherry Flavor	61.1	5.7
Hall's Menthol-Lyptus Cherry	51.5	8.4
Hall's Menthol-Lyptus Honey Lemon	51.8	8.3
Parke-Davis		
Parke-Davis Throat Discs	58.0	0.0
Merrell-National Laboratories		
Cepacol Throat Lozenges	50.6	10.7
Eaton Laboratories		
Chloraseptic	53.1	6.9
Squibb & Sons		
Spec T Sore Throat Cough Suppressant	21.3	3.9
Bristol-Myers		
Silence is Golden	57.8	13.6

Green and Hartles[13] produced high caries incidence with 24% dietary sucrose; greater incidence was not observed with higher levels. Huxley[17] demonstrated that sucrose and glucose are equally cariogenic up to the 10% level, with sucrose becoming significantly more cariogenic than glucose at higher levels. He concluded that eliminating sucrose entirely to decrease caries may not be necessary, but that food and drinks containing more than 20% sucrose should be conscientiously avoided.

Other studies have indicated the importance of sugar concentration in cariogenicity. Kleinberg,[18] Frostell,[19] and deBoever and associates[20] reported that sugar in an oral rinse significantly affected the pH of plaque. At a sugar concentration of 5%, the plaque pH was low enough to demineralize tooth mineral. At concentrations over 5%, the pH was even lower and, more importantly, remained decreased over a longer period of time.

Significant human experimentation has also been accomplished that removes all doubt as to the dental danger associated with certain sucrose dietary patterns. In 1954, the classic Vipeholm study[4] established clearly that the frequency factor, as well as the form in which the sugar was administered, was of prime importance. Sticky sweets such as caramels were particularly damaging. A series of four 1974 papers [5,21-23] reported experiments known collectively as the Turku (Finland) sugar studies. One paper[5] dealt with the effect of dietary sucrose, fructose, and xylitol on the incidence of dental caries in a human population. With caries incidence in the sucrose group taken as a base, the substitution of fructose for sucrose decreased caries incidence by 25%. The observation of greatest significance was that the substitution of xylitol for sucrose reduced caries occurrence by 90%.

Thus, while sucrose must be classified as extremely dangerous to dental health, fructose also has cariogenic potential. Fructose is assuming a new stature in the sugar field because of its relative sweetness and the development of new procedures for its manufacture. It occurs naturally in fruits and may also be produced by

4. Sucrose and glucose content of baby food desserts.

Product	Sucrose (%)	Glucose (%)
Gerber		
Applesauce	4.5	3.5
Apricots with Tapioca	7.4	2.3
Bananas with Pineapple and Tapioca	9.0	1.8
Bananas with Tapioca	9.0	2.1
Cherry Vanilla Pudding	6.6	2.4
Dutch Apple Dessert	4 6	2.3
Fruit Dessert with Tapioca	6.9	3.8
Hawaiian Delight	9.5	2.4
Orange Pudding	11.1	1.2
Peach Cobbler	7.0	2.2
Peaches	6.9	2.2
Pears	3.1	1.5
Pears and Pineapple	4.4	1.7
Plums with Tapioca	13.5	4.8
Vanilla Custard Pudding	9.8	0.2
Heinz		
Apples & Cranberries	0.5	12.7
Apples & Pears	5.1	3.7
Applesauce	4.0	4.0
Applesauce and Apricot	5 3	4.2
Apricots and Tapioca	5 5	12.2
Bananas and Pineapple	6.3	3.4
Custard Pudding	7.4	1 7
Dutch Apple Dessert	5.5	7 8
Fruit Dessert	4.3	10 0
Oatmeal with Apples and Bananas	6.0	2.2
Peaches	8 1	6.1
Pears	2.2	0.6
Prunes with Tapioca	0 5	9 5
Tutti Fruiti	5 6	2.6

*5. Sucrose and glucose content in infant formulas.**

Product	Sucrose (%)	Glucose (%)
Loma Linda		
Soyalac	2.2	0.4
i-Soyalac	4.8	0.0
Mead Johnson		
Enfamil	0.0	0.0
Enfamil with Iron	0.0	0.0
Prosobee	3.8	0.4
Ross Laboratories		
Similac	0.0	0.0
Similac Advance	0.0	0.4
Similac Isomil	2.9	0.4
Similac with Iron	0.0	0.0
Syntex Laboratories		
Bremil	4.0	0.0
Mull-Soy	2.8	0.5
Neo-Mull-Soy	6.0	0.0
Wyeth Laboratories		
Nursoy	2.2	0.8
SMA	0.0	0.0

Home-Prepa.ed Infant Formulas

Ingredients
- Evaporated Milk with Vitamin D (Pet)
- Karo Dark Corn Syrup (Best Foods)
- Karo Light Corn Syrup (Best Foods)
- Gerber's Mixed Cereal for Baby (Gerber's)
- Sugar, Table (Domino)
- Whole Milk (Borden)

	Sucrose (%)	Glucose (%)
Infant formula made with light Karo syrup	0.0	0.4
Infant formula made with dark Karo syrup	0.0	0.4
Infant formula made with light Karo syrup and mixed cereal	0.5	0.4
Infant formula made with dark Karo syrup and mixed cereal	0.4	0.4
Infant formula made with whole milk and sugar	2.1	0.0

*Determinations made on formula fully prepared and ready to eat.

hydrolysis during processing or storage of items containing sucrose. Since fructose was not measured in the present study, the sucrose-glucose tables should not be interpreted as necessarily indicating total sugar content of the test products.

While complete sugar deprivation for caries control is not necessarily recommended, limiting exposures to cariogenic materials is obviously a fundamental part of preventing dental decay. Yet as the eating patterns of our westernized society switch from regular meals to the habit of snacking several times daily, and as manufacturers increasingly add various sugars for flavor and bulk to even the most unlikely products, the prospects for caries control are dismal indeed. A large scale effort by practitioners in all health fields is needed to provide practical advice that will help patients avoid habits and products which are potentially dangerous to oral health. Physicians can be influential in this regard.

As the tables indicate, considerable variation in sugar content exists among various cough and sore throat remedies, vitamin products, baby food desserts, and infant formulas available on the market today. Completely eliminating their use is, of course, neither feasible nor advisable. However, a physician's awareness of the dental hazards of some products and his discretion in suggesting their use can be an important influence on his patient's dental health. By conveying to patients the threats to oral health of excessive sucrose consumption, by emphasizing that both amount and frequency of sucrose intake should be curtailed, and by recommending the judicious use of products having the least cariogenic potential, physicians can contribute greatly in the battle against oral disease.

References

1. Newbrun E: Sucrose, the arch criminal of dental caries. J Dent Child 36:239-248, 1969.
2. Bibby BG: The cariogenicity of snack foods and confections. J Am Dent Assoc 90(1):121-132, 1975.
3. DiOrio LP, Madsen KO: Educating the patient in the prevention of dental disease. March Publishing Company, Chicago, 1972.
4. Gustafsson BE, Quensel CE, Lanke LS, et al: Vipeholm dental caries study; effect of different levels of carbohydrate intake on caries activity in 436 individuals observed for 5 years. Acta Odontol Scand 11:232-346, 1954.
5. Scheinin A, Makinen KK, Ylitalo K: Turku sugar studies. I. An intermediate report on the effect of sucrose, fructose and xylitol diets on the caries incidence in man. Acta Odontol Scand 32(6):383-412, 1974.
6. Madsen KO, Stratemann BS, Stovall MJ, et al: Report of clinical data for faculty and students, University of Texas Dental Branch at Houston, 1972 (personal communication).
7. Shannon IL: Sucrose and glucose in dry breakfast cereals. J Dent Child 41 (5):347-350, 1974.
8. Shannon IL, Wescott WB: Sucrose and glucose concentrations of frequently ingested foods. J Acad Gen Dent 23(3):37-43, 1975.
9. Shannon IL: Edmonds EJ: Dietary sucrose: dental dilemma. Dent Hyg 49:257-261, 1975.
10. Keston AS: Specific colorimetric enzymatic reagents for glucose. Abstracts of papers, 129th meeting, American Chemical Society, April 1956, p. 31C.
11. Kingsley GR, Getchell G: Direct ultramicro glucose oxidase method for determination of glucose in biologic fluids. Clin Chem 6:466-475, 1960.
12. Ishii T, Konig KG, Muhlemann HR: The cariogenicity of different between-meal snacks in Osborne-Mendel rats. Helv Odontol Acta 12:41-47, 1968.
13. Green RM, Hartles RL: The effects of diets containing varying percentages of sucrose and maize starch on caries in the albino rat. Caries Res 4:188-192, 1970.
14. Zepplin M, Smith JK, Parsons HT, et al: Dental caries in cotton rat; effect of feeding a natural diet comparable to human diet. J Nutr 40:203-211, 1950.
15. Gustafsson G, Stelling EM, Abramson, E, et al: Experimental dental caries in golden hamsters. III. The effect of replacement of cereals with sucrose in a diet of human type. Odontol Tedskr 61:386-399, 1953.
16. Grenby TH: White and whole meal bread and flour in the diet of caries susceptible rats. Br Dent J 121:26-38, 1966.
17. Huxley HG: A comparison in experimental animals between diets containing sucrose and glucose. NZ Dent J 66:61-66, 1970.
18. Kleinberg I: Studies on dental plaque. I. The effect of different concentrations of glucose on the pH of dental plaque in vivo. J Dent Res 40:1087-1111, 1961.
19. Frostell G: Dental plaque pH in relation to intake of carbohydrate products. Acta Odontol Scand 27:3-29, 1969.
20. deBoever J, Hirzel HC, Muhlemann HR: The effect of concentrated sucrose solutions on pH of interproximal plaque. Helv Odontol Acta 13:27-28, 1969.
21. Makinen KK, Scheinin A: Turku sugar studies. II. Preliminary biochemical and general findings. Acta Odontol Scand 32(6):413-421, 1974.
22. Larmas M, Makinen KK, Scheinin A: Turku sugar studies. III. An intermediate report on the effect of sucrose, fructose and xylitol diets on the numbers of salivary lactobacilli, candida and streptococci. Acta Odontol Scand 32:423-433, 1974.
23. Gehring F, Makinen KK, Larmas M, et al: Turku sugar studies. IV. An intermediate report on the differentiation of polysaccharide-forming streptococci (S mutans). Acta Odontol Scand 32:435-444, 1974.

Dr. Shannon, Director, Oral Disease Research Laboratory, VA Hospital, 2002 Holcombe Blvd, Houston, TX 77031.

Bacteremia in a metropolitan teaching hospital

S. M. Hussain Qadri, PhD; L. J. Evans, BS; R. D. Wende, DrPH; R. P. Williams, PhD

We studied incidence and etiology of bacteremia at Ben Taub General Hospital, a major teaching hospital for Baylor College of Medicine. From September 1973 to August 1974, there were 19,185 patients admitted, and clinicians suspected bacteremia in 6,850 (35.6%). Of 11,357 blood cultures obtained from these patients, 10.7% grew organisms. Gram-positive cocci were isolated from 35.7%, and gram-negative bacilli from 62.6% of these cultures. Of the potentially pathogenic cocci, *Streptococcus pneumoniae* was most commonly encountered, followed in descending order by *Staphylococcus aureus*, enterococcus, and *beta-streptococci*. Although *Escherichia coli* was the most frequently isolated gram-negative bacillus, the data suggested that the incidence of bacteremia due to *E coli* was declining and was replaced by a rising trend in isolations of *Klebsiella* and *Pseudomonas* species. *Bacteroides fragilis* represented 43.9% of all the anaerobic isolations. Other anaerobic bacteria of significance included *Peptostreptococcus, Peptococcus,* and *Clostridium perfringens*.

Introduction

Bacteremia in hospital patients has been of primary concern to the hospital medical staff, as well as to medical microbiologists, for over 50 years. Martin[15] reported a steady rise in the incidence of bacteremia in hospitals in the USA. Dupont and Spink[7] and Finland[9] observed that this increase in frequency of bacteremia could be attributed partially to the greater number of blood cultures obtained from more hospital patients in recent years.

A number of investigators reported that the increased incidence of bacteremia was not limited to the usual etiological pattern of gram-positive microorganisms, but had changed to reflect an increased number of gram-negative infections.[5,9-11,22,24] In view of the changing practices and patterns of etiologic agents involved in bacteremia, Dalton and Allison[6] and Sonnenwirth[24] emphasized the importance for investigators to gather and to disseminate information concerning the epidemiology and the clinical significance of microorganisms associated with bacteremia. Only by such surveillance could changes in etiology be documented, and the problem of bacteremia fully explored. This article describes the recent incidence of bacteremia at Ben Taub General Hospital, a major teaching hospital for Baylor College of Medicine.

Materials and Methods

Collection of Blood

Blood (5 to 10 ml) was collected by physicians by venipuncture with a sterile syringe and needle and inoculated at the patient's bedside into a single bottle of blood culture media (50 to 100 ml). The venipuncture site was disinfected by treating the skin with 2% iodine for 1 minute followed by similar treatment with 70% ethanol or 70% isopropanol.

Media Used

Two kinds of media were used: (a) E-Vac Columbia (Pfizer) broth and (b) brain heart infusion broth (BHIB) (Difco) with pABA and 0.1% agar. The latter medium was prepared by personnel of the hospital

From the Departments of Pathology and Microbiology and Immunology, Baylor College of Medicine, and Department of Pathology, The University of Texas Medical School, Houston, Texas 77025.

microbiology laboratory and was dispensed in 100 ml quantity in 250-ml screw cap prescription bottles. Media were sterilized in an autoclave for 15 minutes at 121° C and 15 lbs of pressure. Both media were available to the physicians, but less than 1% of the blood cultures submitted were in E-Vac Columbia broth. Columbia broth contained 0.05% sodium polyanethol sulfonate (SPS), whereas BHIB did not receive any SPS because in 0.1% agar it causes turbidity and cloudiness. Control studies with simulated blood cultures with known aerobic as well as anaerobic bacteria showed that although BHIB was devoid of vacuum and SPS, it performed as well as Columbia broth (unpublished data).

Laboratory Processing of Blood Cultures

All specimens were incubated promptly at 35° C with loosened screw caps in a carbon dioxide incubator for the first 24 hours. The bottles then were moved to a regular 35° C incubator for further incubation and were examined at least once daily for microbial growth, as evidenced by turbidity, gas formation, or hemolysis. If one of the latter characteristics appeared, cultures were stained with Gram's stain and the observations were reported to the medical staff. These cultures also were inoculated at once onto appropriate media, such as sheep blood agar, MacConkey agar, and chocolate agar, for isolation of etiologic agents. Chocolate plates were incubated in a carbon dioxide (10%) incubator, MacConkey plates under aerobic conditions, and sheep blood agar plates under anaerobic conditions in a Gas-Pak jar (BBL). Isolated organisms were identified by the procedures described in the *Manual of Clinical Microbiology*[1] and the 7th edition of *Bergey's Manual of Determinative Bacteriology*.[4]

If at the end of incubation for ten days at 35° C no evidence of growth appeared, the blood cultures were reported as negative. However, prior to discard, the sediment from the bottle was subcultured on chocolate and blood agar plates. Chocolate plates were kept under 10% carbon dioxide and blood agar plates under anaerobic conditions in a Gas-Pak jar. All these plates were incubated at 35° C for 48 hours and were examined for colonies before a final report was submitted for a negative blood culture.

All figures given in results refer to the total number of cases of bacteremia rather than the total blood cultures performed or total number of positive cultures. Repeat cultures, as well as positives on such cultures, represented one case and were thus counted as one.

Results

Fig 1 compares the incidence of bacteremia with the number of hospital admissions during one year, from Sept 1, 1973, to Aug 31, 1974. Although the number of patients suspected of having bacteremia, and hence cultured, varied from a low of 21.3% of admissions in October to a high of 41.7% in November, the number of cultures submitted to the laboratory, and

1. Incidence of bacteremia.

	For 1 year	Average/ month
Number of admissions	19,185	1,599
Number of cultures	11,357	946
Number of patients cultured	6,850	570
% of patients cultured	35.6	
Number of patients with positive blood cultures*	732	61
% of patients with positive blood cultures	10.7	

*Cultures positive for organisms listed in Fig 3 were omitted from these figures.

2. *Microorganisms isolated from cases of bacteremia.*

Group	Microorganism	Total Number Isolated	% of Isolations Within Group*	% of Isolations Within Total Cases of Bacteremia†
Aerobic Cocci	*S aureus*	83	30.0	11.3
	S pneumoniae	89	32.1	12.2
	Enterococcus	61	22.0	8.3
	β-streptococcus, group B	31	11.2	4.2
	β-streptococcus, group A	13	4.7	1.8
	N gonorrhoeae	3	--	0.4
	N meningitidis	3	--	0.4
	Totals	283	100.0‡	38.6
Aerobic Gram-negative Rods	*E coli*	110	21.9	15.0
	Pseudomonas sp	95	18.9	12.8
	K pneumoniae	73	14.5	9.8
	Proteus sp	59	11.7	8.1
	Enterobacter	43	8.5	5.9
	Haemophilus	63	12.5	8.6
	Citrobacter	16	3.2	2.2
	Serratia	17	3.4	2.3
	Acinctobacter	13	2.6	1.8
	Salmonella	4	0.8	0.5
	Providencia	4	0.8	0.5
	Aeromonas	3	0.6	0.4
	Moraxella	3	0.6	0.4
	Totals	503	100.0	68.7
Anaerobic Bacteria	*Bacteroides fragilis*	25	43.9	3.4
	C perfringens	8	14.0	1.1
	Clostridium sp	3	5.3	0.4
	Lactobacillus sp	1	1.8	0.1
	Fusobacterium	1	1.8	0.1
	Arachnia propionica	1	1.8	0.1
	Peptococcus	9	15.7	1.2
	Peptostreptococcus	9	15.7	1.2
	Totals	57	100.0	7.7

*Total in column 3 for each microorganism divided by total number within column 3 for each group, multiplied by 100.
†Calculated on basis of 732 patients with positive cultures (column 2, Fig 1). When more than one microorganism was isolated from a culture, each species was listed individually in the table. Thus, the total of column 3 is 843 and includes 101 cultures with multiple isolations. Consequently, the total of percentages in column 5 is 115.
‡The percent of isolations was calculated for gram-positive cocci only, and the last two species of the group were excluded.

the percent of these cultures that was positive, remained fairly constant.

The etiologic agents of bacteremia were divided into three groups: aerobic cocci, aerobic bacilli, and anaerobic bacteria (Fig 2). Of the 732 patients with positive blood cultures, two microorganisms were isolated from 101 specimens (13.8%). Each of the microorganisms was listed separately for inclusion in the data listed in Fig 2; thus, the total number of bacteria tabulated is 843.

Aerobic Cocci

Of the potentially pathogenic cocci, *Streptococcus pneumoniae* was most commonly encountered, followed by

Staphylococcus aureus. Fig 2 shows the incidence of aerobic cocci isolated from blood cultures. Although beta-streptococcus, Lancefield group B, was isolated more frequently from blood cultures than group A streptococcus, almost all of the group B cultures were obtained from pediatric patients. There was no pattern of seasonal variations in the bacteremia caused by aerobic cocci except for *S pneumoniae* which showed a rise during the winter months.

Aerobic Bacilli

A number of investigators have reported an increase during recent years of bacteremia caused by aerobic, gram-negative rods. At this hospital (Fig 2), *Escherichia coli* represented 21.9% of the total isolations of gram-negative rods, followed by *Pseudomonas. Klebsiella-Enterobacter* species were isolated from 23% of the blood cultures. All isolates of *Haemophilus influenzae* were found to be type B, and 98% of these were isolated from pediatric patients. Of the 13 isolates of *Acinetobacter calcoaceticus,* 8 were identified as var *anitratus (Herellea vaginicola)* and 5 as var lwoffi *(Mima polymorpha).* Pseudomonads were isolated from a total of 95 blood cultures and represented 18.9% of the bacteremias caused by gram-negative bacilli, or 12.8% of all positive blood cultures. Fig 3 shows that 83.2% of pseudomonads were identified as *P aeruginosa,* followed by *P maltophila* (7.4%), and *P fluorescens* (5.3%). One isolate was identified as *P stutzeri,* and another, as *P putida.*

Species of *Proteus* were isolated from 11.7% of all the blood cultures that grew gram-negative rods. Fig 4 shows that of the 59 isolates identified as *Proteus,* the majority consisted of *P mirabilis* (66.1%), followed by *P morganii* (18.6%), *P rettgeri* (8.5%), and *P vulgaris* (6.8%).

Anaerobic Bacteria

At Ben Taub General Hospital, 7.7% of all the positive blood cultures yielded anaerobic bacteria (Fig 2). *Bacteroides fragilis,* which has been implicated as a causative agent of bacteremia, represented 43.9% of all the anaerobic isolations. Other anaerobic bacteria of significance included *Peptostreptococcus, Peptococcus* and *Clostridium perfringens.* No attempt was made to speciate anaerobic bacteria beyond genus except for *C perfringens* and *B fragilis.* All the bacteroides isolated from blood cultures were found to be *B fragilis.*

3. Species of Pseudomonas *isolated from blood cultures.*

Organism	Total for Year	% of Total Positive Cultures	% of Gram-negative Rods Isolated	% of *Pseudomonas* Isolations
P aeruginosa	79	10.6	15.7	83.2
P maltophilia	7	0.9	1.4	7.4
P fluorescens	6	0.8	1.0	5.3
P alcaligenes	2	0.3	0.4	2.1
P stutzeri	1	0.1	0.2	1.0
P putida	1	0.1	0.2	1.0
Total	95	12.8	18.9	100.0

Bacteria of Questionable Significance

Isolation and identification of microorganisms from blood is a most important laboratory procedure. However, these cultures are subject to contamination during the collection and process of the specimen. As a result, a number of organisms are isolated and identified whose clinical significance is not yet established. Fig 5 shows the frequency of isolation of such bacteria from blood cultures in these studies. This group of organisms constituted 44.2% of all the positive blood cultures. Although most of these organisms are considered to be saprophytic, and, therefore, contaminants, Finland and Jones[10] and McCabe and Jackson[19] pointed out the significance of changing patterns in the etiology of bacteremia. Solowey,[23] and Wilson and associates,[26] Hamburger and associates,[13] Wittler and associates,[27] Brandt and Swahn,[3] and Geraci and associates[12] showed that most of these "contaminants" were isolated from blood cultures collected from patients with subacute bacterial endocarditis. The etiology of such organisms in bacteremia can be suspected when these bacteria are isolated from repeated blood cultures. We found at least three cases of subacute bacterial endocarditis caused by alpha-streptococcus, two cases by coagulase-negative staphylococci, and one by a *Corynebacterium.*

Of 671 isolates from blood of bacteria of questionable significance, coagulase-negative staphylococci were the most common. Except in the two cases of subacute bacterial endocarditis, cited above, all isolates were considered as contaminants because either the patient had no clinical evidence of bacteremia, or the bacteria were isolated from only one of several blood cultures from the same patient. As shown in Fig 5, coagulase-negative staphylococci represented 26.4% of all the positive blood cultures. Dalton and Allison[6] found a similar incidence (23%) of *S epidermidis* from blood cultures.

Investigations on the distribution of coagulase-negative staphylococci from various services at Ben Taub General Hospital showed an interesting pattern. Blood cultures from pediatric services yielded a much higher proportion of these contaminants than any other service. Although only 35.4% of the blood cultures performed came from pediatric patients, more than half of total coagulase-negative staphylococci were isolated from the cultures of these patients. Fig 6 compares various figures obtained from pediatric patients to the figures obtained from the total number of cultures submitted for all patients. The frequency of positive blood cultures from pediatric patients varied during 1973-1974 from a low of 10.2% in October to a high of 24.4% in June, with an average of 16.1% for the 12-month period. The average was lower than the average of 19.4% for the total population from whom blood cultures were obtained. Yet isolation of coagulase-negative staphylococci from pediatric services was higher, and constituted 59.1% of all positive cultures as compared to 26.4%

4. Frequency of Proteus *sp isolated from blood cultures.*

Organism	Total for Year	% of Total Positive Cultures	% of Gram-negative Rods Isolated	% of *Proteus* Isolations
P mirabilis	39	5.3	7.8	66.1
P morganii	11	1.5	2.2	18.6
P rettgeri	5	0.7	1.0	8.5
P vulgaris	4	0.6	0.7	6.8
Total	59	8.1	11.7	100.0

for the entire population. In November 1973, 79.2% of isolates from blood cultures from pediatric services were coagulase-negative staphylococci. A higher rate of contamination from pediatric patients, as compared to adult patients, is expected and may be considered normal because of the difficulties involved in obtaining blood from pediatric patients, but contamination rates of over 50% during most of this study suggest that the problem of contamination might be greater in a teaching hospital.

Discussion

The number of admissions to Ben Taub General Hospital, with a maximum capacity of 530 beds, averages more than 19,000 per year. The number of blood cultures examined in the microbiology laboratory before Aug 31, 1973, averaged about 700 per month and increased to average 946 from Sept 1, 1973, to Aug 31, 1974. This rise in the number of blood cultures drawn is likely a result of more awareness of patients at risk of acquiring bacteremia, as well as an increased emphasis on routine collection of blood cultures.

Frequency of cases of bacteremia with positive blood cultures averaged 3.8% of admissions at Ben Taub General Hospital, a significant rise over an estimated range of 1% of admissions for bacteremias in US hospitals[16] and of 0.975% at the Jewish Hospital of St. Louis (Sonnenwirth).[24] Finland[9] suggested that the increased frequency and changing etiology of bacteremia might be a result of selective pressure of extensive use of antibiotics in hospital patients for therapy, as well as prophylaxis. We reported a higher incidence (13.8%) of isolations of more than one organism from blood cultures than found by other investigators [24] From 1960 to 1970, the number of "polymicrobial infections" increased from 3.8 to 7.3%.[24]

Blood cultures taken from suspected bacteremic patients at Ben Taub General Hospital revealed a wide variety of microorganisms. Gram-positive cocci were isolated from 35.7% of positive blood cultures and gram-negative bacilli from 62.6% of the cultures. Our results

5. Bacteria of questionable significance.

Microorganism	Total Number Isolated	% of Isolations Within Group*	% of Total Isolations†
Coagulase-negative staphylococci	400	59.6	26.4
α-streptococcus	67	10.0	4.4
γ-streptococcus	3	0.4	0.2
Micrococcus	7	1.0	0.5
Neisseria sp	2	0.3	0.1
Corynebacterium	85	12.8	5.5
Propionibacterium	80	11.9	5.3
Bacillus	22	3.4	1.5
M rhodonchrous	1	0.1	0.1
Sarcina lutea	3	0.4	0.2
Flavobacterium	1	0.1	0.1
Totals	671	100.0	44.3

*Total in column 2 for each microorganism divided by total number within column 2 for this group, multiplied by 100.
†Calculated on basis of 1,514 isolates being total of isolates from Fig 2 and column 2 of Fig 5.

indicated an upsurge in the isolation of gram-negative bacteria from patients with bacteremia. The increase agreed with the national trend reported by other investigators in surveys of hospital patients with bacteremia.[5,9,10,16-19,21,24] This increase probably resulted not only from the selective pressure of the wide use of antibiotics but also from a number of other factors that included an increase in the number of patients in immunologically compromised situations resulting either from radiation, steroid or antimetabolic therapy, or as a result of diseases such as leukemia, diabetes mellitus, malignant lymphoma, aplastic anemia, and liver diseases.[5,6,17,22]

A number of investigators reported that of the gram-negative bacilli, *E coli* caused the highest frequency of bacteremia. McCabe[18] reported isolation of *E coli* from 37% of bacteremias, and Sonnenwirth[24] isolated this organism from 24.5% of positive blood cultures. When compared to data reported by other investigators, the incidence (15.0%) in our study of bacteremia due to *E coli* appeared to decline with a rise in isolations of the *Klebsiella-Enterobacter* group from blood cultures. Dalton and Allison[6] reported that *Klebsiella* was involved in less than 4% of bacteremias. The reported incidence in two other studies of bacteremias caused by *Klebsiella-Enterobacter* was 15.9% in 1970[24] and 20% in 1971.[18] At Ben Taub General Hospital, *Klebsiella-Enterobacter* constituted 15.7% of all significant isolations.

Dalton and Allison[6] reported an increase from 1.6% in 1950 to 4.8% in 1954 of *Pseudomonas* species isolated from blood cultures. Sonnenwirth[24] showed a similar increase from 1.2% in 1960 to 7.3% in 1970 of pseudomonad isolations from the blood cultures at the Jewish

6. Coagulase-negative staphylococci isolated from blood cultures.

Months	Number of Patients with Suspected Bacteremia*		Total Number of Blood Cultures Submitted		Number of Pediatric Patients with Positive Blood Cultures		Coagulase-negative Staphylococci			
							Number		Percent	
	All Patients	Pediatric Patients	All Patients	Pediatric Patients	Number	Percent†	All Patients	Pediatric Patients	All Patients	Pediatric Patients‡
1973										
September	552	215	840	220	38	17.6	40	19	33.8	50.0
October	348	216	911	229	22	10.2	27	13	29.0	29.0
November	648	188	1,082	196	24	12.8	37	19	27.2	79.2
December	554	179	844	188	20	11.2	24	13	25.3	65.0
1974										
January	593	235	965	252	31	13.2	25	23	24.8	74.2
February	593	190	931	208	29	15.3	26	15	26.0	51.7
March	568	224	897	241	38	17.0	31	23	35.6	60.5
April	563	186	975	197	34	18.3	30	12	24.8	35.3
May	619	213	1,063	243	36	16.9	30	21	26.5	58.3
June	525	198	832	205	46	24.4	42	28	39.6	60.9
July	683	205	1,031	214	38	18.5	50	25	34.9	65.8
August	604	181	986	192	35	19.3	38	20	30.9	57.1
Total	6,850	2,430	11,357	2,535	391		400	231		
Percent	100	35.4	100	22.3		16.1	100	57.7	29.9	59.1

*Clinical diagnosis considered by physicians.
†Figure in column 6 divided by figure in column 3, multiplied by 100.
‡Figure in column 9 divided by figure in column 6, multiplied by 100.

Hospital in St. Louis. At Ben Taub General Hospital 12.8% of bacteremias yielded pseudomonads, an increase of over 5% from Sonnenwirth's findings.

There is a rising interest in recent years in infections caused by anaerobic bacteria. This interest has resulted in attempts to isolate and identify these organisms from blood cultures and to correlate their etiology in bacteremia.[2,8,14,25]

Of the anaerobic isolates, *B fragilis* has been of prime interest as a causative agent of bacteremia. At Ben Taub General Hospital, *B fragilis* represented only 3.4% of all the isolates from blood cultures, constituting 43.9% of the anaerobic isolations. Dalton and Allison[6] isolated this organism from only 0.5% of bacteremic patients, whereas Washington[25] and Sonnenwirth[24] reported its isolation from 13.8% and 6.6% of blood cultures, respectively. Sonnenwirth[24] suggests that such variations in isolation of bacteroides may be due to differences in availability and use of anaerobic methodology in various laboratories and to the type of patients admitted to different hospitals.

Other anaerobic bacteria most frequently isolated from blood cultures were propionibacteria, representing 5.3% of all the isolations at Ben Taub General Hospital. Although *Propionibacterium* species have been isolated from the blood of patients with symptoms of endocarditis,[8] Washington[25] believes that they are rarely of any clinical significance and probably represent skin contaminants.

References

1. Blair JE, Lennette EH, Truant JP: Manual of clinical microbiology. Bethesda, Am Soc Microbiol, 1970.

2. Bornstein DL, Weinberg N, Swartz, et al: Anaerobic infections. Review of current experience. Medicine (Balt) 43:207-232, 1964.

3. Brandt L, Swahn S: Subacute bacterial endocarditis due to coagulase-negative *Staphylococcus albus*. Acta Med Scand 166:125-132, 1960.

4. Breed RS, Murray EG, Smith NR: Bergey's manual of determinative bacteriology, 7th ed. Williams and Wilkins Co, Baltimore, Md, 1957.

5. Brumfitt W, Leigh DA: The incidence and bacteriology of bacteriaemia—a study of two hospitals. Proc R Soc Med 62:1239-1242, 1969.

6. Dalton HP, Allison MJ: Etiology of bacteremia. Applied Microbiol 15: 808-814, 1967.

7. DuPont HL, Spink WW: Infections due to gram-negative organisms: an analysis of 860 patients with bacteremia at the University of Minnesota Medical Center, 1958-1966. Medicine (Balt) 48:307-332, 1969.

8. Felner JM, Dowell VR Jr: Anaerobic bacterial endocarditis. N Eng J Med 283:1188-1192, 1970.

9. Finland M: Changing ecology of bacterial infections as related to antibacterial therapy. J Inf Dis 122:419-431, 1970.

10. Finland M, Jones WF Jr, Barnes MW: Occurrence of serious bacterial infections since introduction of antibacterial agents. J Am Med Assoc 170:2188-2197, 1959.

11. Franciosi RA, Favara BE: A single blood culture for confirmation of the diagnosis of neonatal septicemia. Am J Clin Pathol 57:215-219, 1972.

12. Geraci JE, Hanson KC, Giuliani ER: Endocarditis caused by coagulase-negative staphylococci. Mayo Clin Proceed 43:420-434, 1968.

13. Hamburger M, Carleton MJ, Harcourt M: Reversal of the anti-staphylococcal action of tetracycline by magnesium. Antibiot Chemother (Wash) 7:274-278, 1957.

14. Marcoux JA, Zabransky RJ, Washington JA 2nd, et al: Bacteroides bacteremia. Minn Med 53:1169-1176, 1970.

15. Martin CM: A national bacteremia registry. J Inf Dis 120:495-496, 1959.

16. Martin WJ: Some observations on bacteremia due to gram-negative bacilli. S Dakota J Med Pharm 17:22-30, 1964.

17. Martin WJ, McHenry MC: Bacteremia due to gram-negative bacilli. Resume of experiences in 303 cases. Lancet 84:385-394, 1964.

18. McCabe WR: Gram-negative bacteremia: a physician's overview, in Sanford JP, ed: In Gram-negative sepsis. New York, Medcom, 1971.

19. McCabe WR, Jackson GG: Gram-negative bacteremia. I. Etiology and ecology. Arch Int Med 110:847-855, 1962.

20. McCabe WR, Jackson GG: Gram-negative bacteremia. II. Clinical, laboratory, and therapeutic observations. Arch Int Med (Chicago) 110:856-864, 1962.

21. McHenry MC, Martin WJ, Wellman WE: Bacteremia due to gram-negative bacilli. Review of 113 cases encountered in the five-year period 1955-1959. Ann Int Med 56:207-219, 1962.

22. Parker MT: Causes and prevention of sepsis due to gram-negative bacteria. Ecology of the infecting organisms. Proc R Soc Med 64:979-980, 1971.

23. Solowey M: Serological classification of viridans streptococci with special reference to those isolated from subacute bacterial endocarditis. J Exper Med 76:109-126, 1942.

24. Sonnenwirth AC: Bacteremia-extent of the problem, in Bacteremia: Laboratory and clinical aspects. Charles C Thomas, Springfield, Ill, 1973, pp 3-14.

25. Washington JA: Bacteremia due to anaerobic, unusual and fastidious bacteria, in: Sonnenwirth AC, ed: Bacteremia. Laboratory and clinical aspects. Charles C Thomas, Springfield, Ill, 1973, pp 41-60.

26. Wilson R, Hamburger M: Fifteen years' experience with Staphylococcus septicemia in a large city hospital; analysis of fifty-five cases in the Cincinnati General Hospital 1940-1954. Am J Med 22:437-457, 1957.

27. Wittler RG, Malizia WF, Kramer PE, et al: Isolation of a Corynebacterium and its transitional forms from a case of subacute bacterial endocarditis treated with antibiotics. J Gen Microbiol 23:315-333, 1960.

Dr. Qadri, Director of Microbiology, Department of Pathology, Hermann Hospital, Houston, TX 77025.

Gas in portal vein of adults with necrotizing enteropathy

Peter J. Naus, MD; Hidenori Kawanishi, MD; Gil S. Borlaza, MD

Gas in the portal vein is a not infrequent phenomenon that usually indicates intestinal necrosis and demands prompt surgical treatment in the adult. The internist should suspect this condition in patients with severe atherosclerotic vascular disease, especially when accompanied by ileus, sepsis, or shock. We emphasize the need for a roentgenogram of the right upper quadrant of the abdomen to establish the correct diagnosis promptly. As a higher index of suspicion yields earlier diagnosis, we may see higher survival rates.

As early as 1955, Wolfe and Evans reported the presence of gas in the portal venous system of six infants with necrotizing enterocolitis.[1] Originally this sign was thought to be a rare entity; yet recently, many cases have been published in pediatric literature.[2,3] In 1960, Susman and Senturia[4] described a case of gas embolization of the portal venous system in an adult. Later, in 1970, Berne[5] analyzed 12 cases in adults in which this diagnosis was established radiologically. Severe atherosclerotic vascular disease was commonly seen, and 75% of the cases had intestinal necrosis.

This report is presented to alert the internists to the not infrequent finding of gas in the portal vein in the arteriosclerotic patient with acute digestive disease. The diagnostic pattern of gas in the right upper quadrant of the abdomen is not obvious unless one specifically looks for it on the flat plate. We present two such cases seen on our medical service, and believe that, with increasing awareness, the disorder will be diagnosed more frequently in general hospitals.

Case Reports

Case 1: The patient, a 47-year-old white man, was referred to the medical service on Oct 24, 1975, with a three-month history of midepigastric, nonradiating abdominal pain, 13.6 kg (30 lb) weight loss, and progressive anorexia. There were two previous episodes of nonbloody emesis. He complained of constant pain in his abdomen with no relation to food intake, and persistent emesis the week before admission. He also had intermittent nonbloody diarrhea, but had one tarry stool in the morning of admission. Alcoholic intake was less than two to three beers per day. There was no previous history of gastrointestinal, hepatobiliary, or pancreatic diseases.

The patient was thin, dehydrated, and in mild distress. Abdominal examination showed moderate tenderness in the midepigastrium, without rigidity or rebound tenderness. Bowel sounds were hypoactive. The liver edge was not palpable, and total length of liver dullness at the midclavicular line was 7 cm. No masses were palpated. The prostate was large without nodularity.

On admission, results of serum amylase, electrolytes, and liver function studies were normal. Stool specimen was positive (4+) for guaiac. Serum glucose level was 276 mg/100 ml. Hematocrit was 38.6% and white blood cell count was 23,900/ cu mm. Prothrombin time was 44.5% and platelet count was 340,000/ cu mm. Sigmoidoscopic examination on the day of admission was normal. Multiple submucosal and mucosal hemorrhages along the greater curvature in the body of the stomach were seen on gastroscopic examination. The remaining mucosa appeared remarkably pale. A shallow, chronic, gastric ulcer was seen in the descending portion of the stomach where the gastroscope could not be advanced because of spasm. A kidneys-ureters-bladder film made the following day (Oct 25, 1975) showed air in the portal system of the liver and ileus with air

fluid levels (Fig 1). Pneumatosis intestinalis was also present (Fig 1, inset). No air was observed under the diaphragms.

Because air was found in the portal system of the liver, surgery was advised despite the patient's moderate distress. Exploratory celiotomy and superior mesenteric revascularization were performed. At surgery, air in the portal vein, ischemic necrosis of the stomach and intestine, and

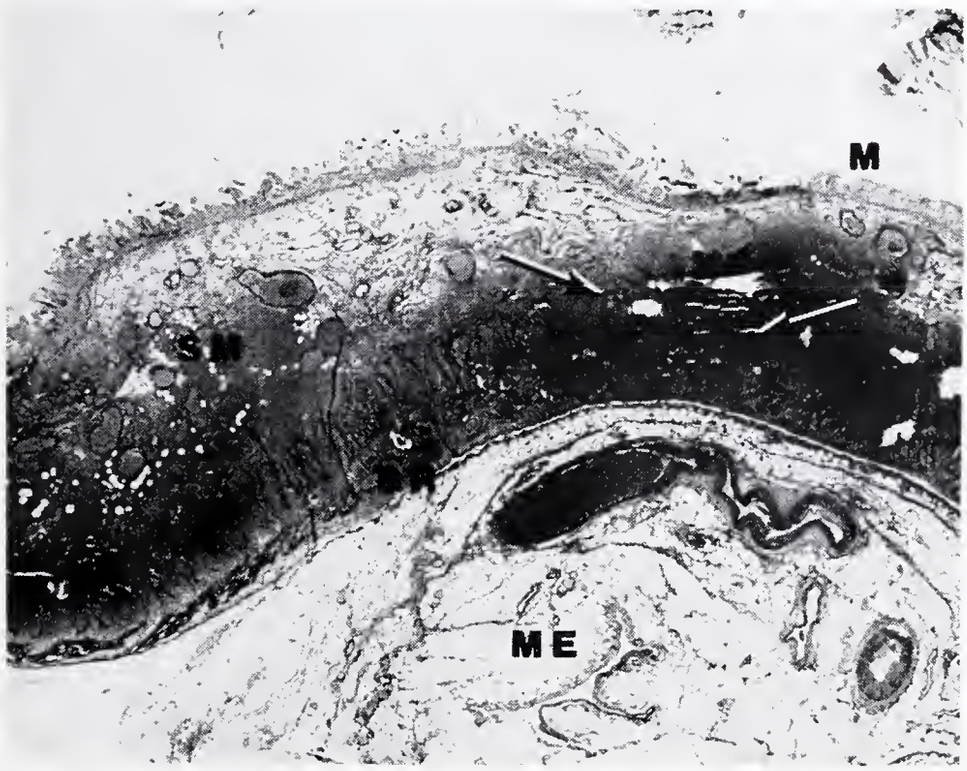
1. KUB film of the abdomen with ileus (case 1). Note air in the portal system of the liver. Air fluid levels are seen in the intestinal loops. Inset demonstrates pneumatosis intestinalis in the wall of the dilated small intestine.

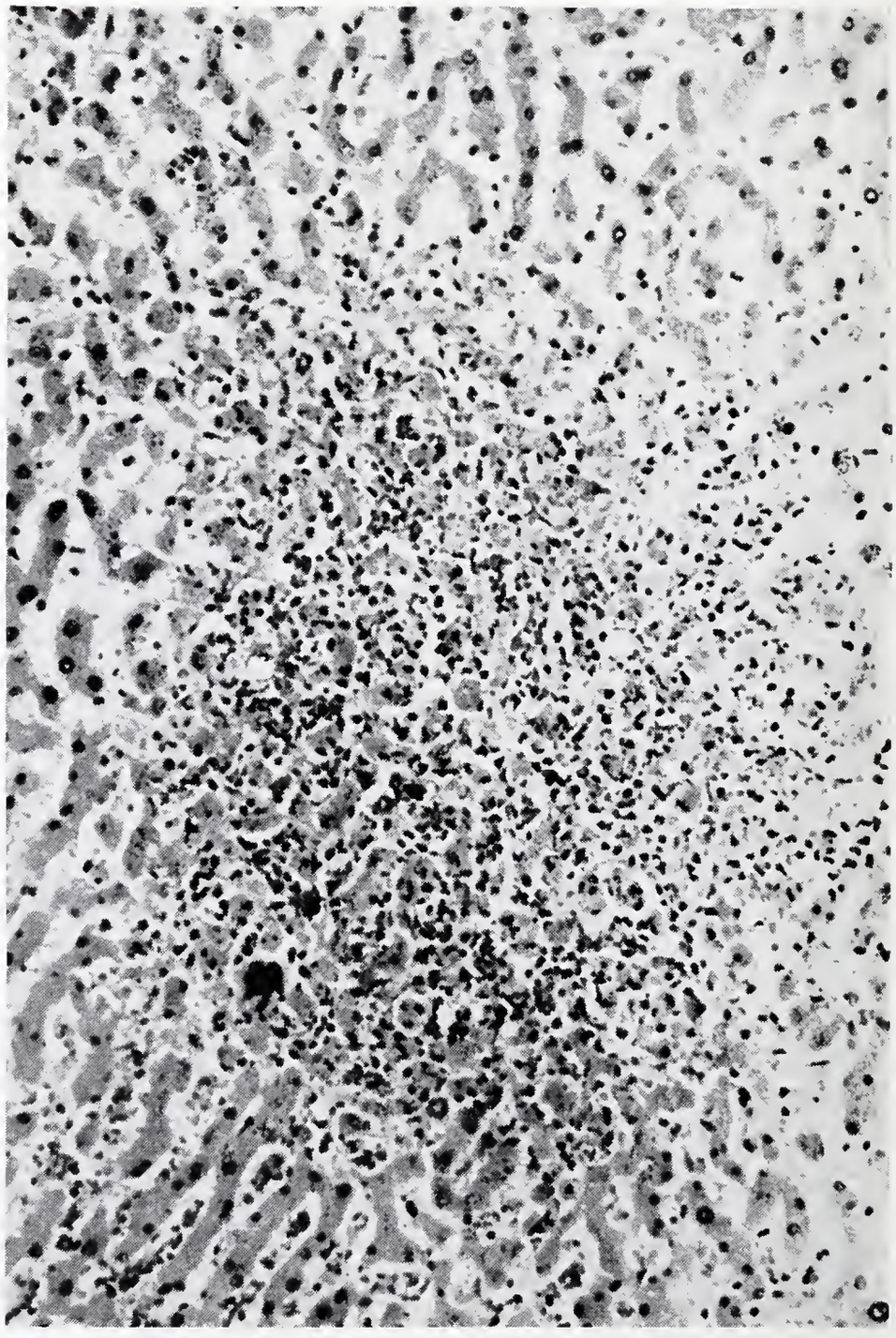
occlusive thrombi in the celiac and superior mesenteric arteries were found. The patient's postoperative condition was extremely precarious, and he died the day after surgery.

Autopsy revealed generalized atherosclerosis and sclerotic narrowing of the celiac and superior mesenteric arteries. Recent occlusive thrombi were seen in the superior mesenteric artery. Acute ischemic necrosis of the stomach, small intestine, and colon (except the sigmoid colon) was seen. Histologically, the involved small and large intestines showed intensive ischemic necrosis involving either partial or full thickness of the bowel wall (Fig 2). In the liver there was centrolobular necrosis, infiltrated by many polymorphonuclear leukocytes (Fig 3). The central vein was obstructed at several sites. Kupffer's cells were hyperactive and proliferated. Nonspecific inflammatory reaction was present in the portal tract.

Case 2: The patient, a 51-year-old white man, had a long history of arteriosclerotic peripheral vascular disease. Progressive one-half block claudication limited his ability to work. On Jan 31, 1974, he underwent transaxillary arteriography of his aorta and extremities. During this procedure, an accidental subintimal injection dissected the superior mesenteric artery. A few hours after the arteriogram, symptoms of acute abdominal distress developed, and both feet were pulseless and cyanotic. On Feb 1, 1974, a celiotomy was performed. At this time, the small bowel was gangrenous beginning 91 cm (3 ft) below the ligament of

2. Cross section of a part of the infarcted ileum (case 1). The entire wall is disintegrated with intramural hemorrhages. Arrows indicate an area of panmural necrosis. M: mucosa; SM: submucosa; MS: muscle layer; SR: serosa; ME: mesenterium.





3. A portion of liver tissue (case 1) showing intensive necrosis of the centrolobule. The central vein is obstructed. Numerous polymorphonuclear leukocytes are present. Hematoxylin and eosin, X 200.

Treitz and extending to the ileocecal valve. He underwent resection of the necrotic small bowel, ascending jejunocolostomy, and aortofemoral bypass. Postoperatively, he experienced intractable diarrhea and questionable pulmonary embolus on March 2, 1974. Because of refractory short gut syndrome, he was transferred to our hospital on April 5, 1974.

On May 24, 1974, he again presented with an acute abdominal disorder. Values for serum amylase and electrolytes were normal. Other values were: serum glucose, 260 mg/100 ml; total bilirubin, 0.2 mg/100 ml; alkaline phosphatase, 166 mμ/ml; SGOT, 33 mμ/ml; hematocrit, 41.5%; white blood cells, 17,800/cu mm. A roentgenogram of the abdomen demonstrated air in the hepatic portal vein and "thumb-printing" in the descending and sigmoid colon (Fig 4). Another celiotomy was performed and gangrene of the remaining jejunum and remaining colon down to the sigmoid was noted. Both the superior and inferior mesenteric arteries were thrombosed. The histological examination of the resected intestine showed many panmural necrotic foci in addition to diffuse necrosis in the mucosa and submucosa. The patient's postoperative course was one of repeated sepsis and complications from internal bowel anastomosis. A fistula developed through his abdominal wound, and became progressively larger. The patient died on Aug 2, 1974.

Discussion

Although several articles have been published, few cases have been discussed in medical journals. Authors differ as to the most common cause of air in the hepatic portal vein. Berne[5] found necrosis of the bowel to be the most common finding, and on many occasions there was associated sepsis. Fred and associates found the principal cause in the adult to be mesenteric vascular occlusion with enteric gangrene.[6]

Both of our patients were adults with severe generalized atherosclerotic vascular disease and bowel necrosis secondary to mesenteric arterial thrombotic occlusion. Wiot and Felson believed the gas in the portal vein was a consequence of sepsis by gas-forming organisms.[7] In our first case the liver histology may support their concept and may be explained by bacteria and toxic necrotic debris from the infarcted intestine passing through the portal vein.

Air in the hepatic portal vein has been associated frequently with other conditions: peroxide enema,[8] ingestion of corrosive substances,[9] umbilical vein catheterization,[10] a dead fetus,[11] small bowel obstruction[5] and rectal bleeding in patients with severe underlying atherosclerotic vascular disease.[5] It has also been reported as a benign phenomenon after barium enema in a patient with ulcerative colitis.[12] In adults, air in the portal vein is predominantly associated with ischemia and bowel necrosis. Shock, sepsis, and instrumentation are predisposing factors.[5,6]

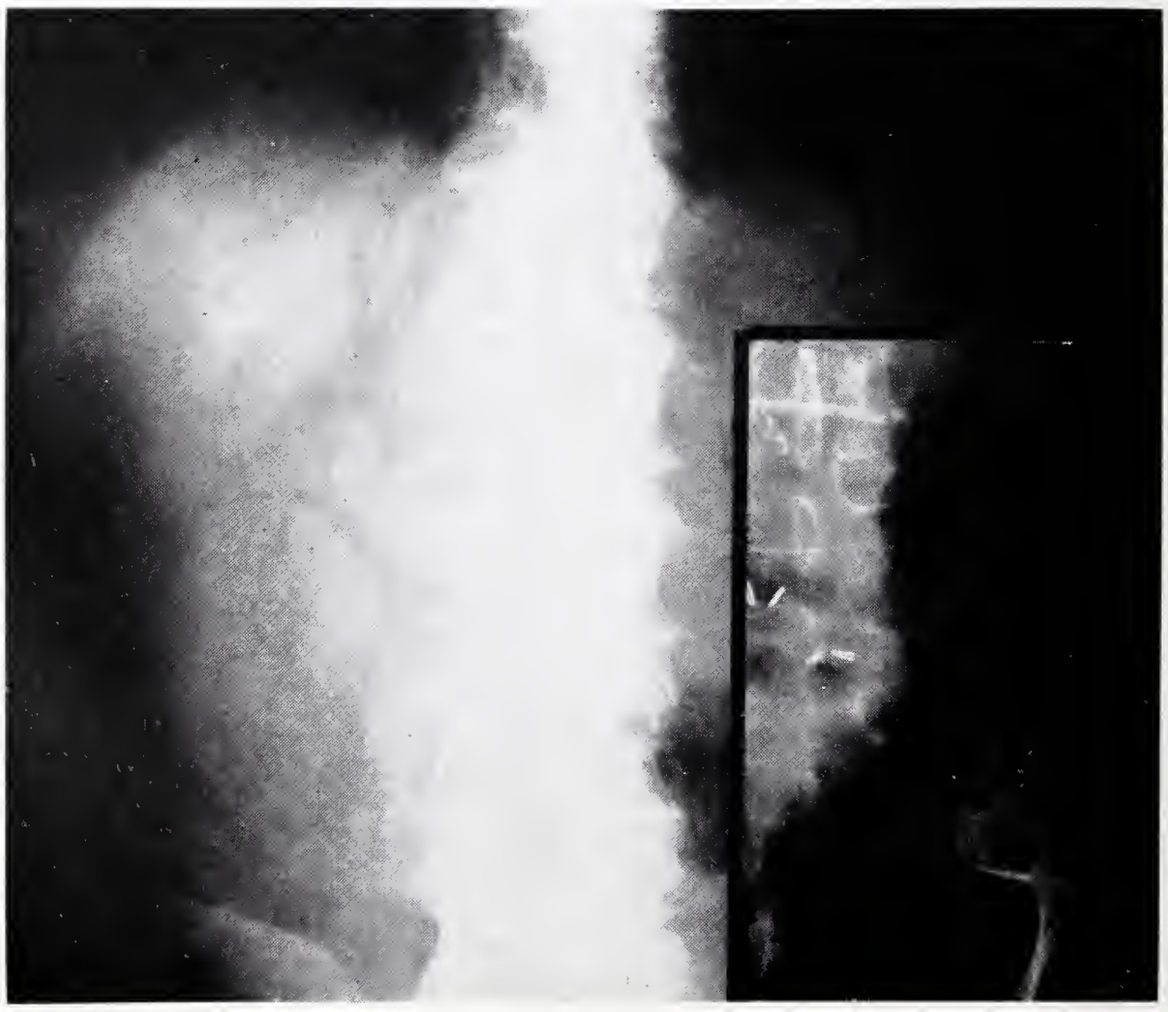
The characteristic radiographic appearance is that of tubular lucencies branching from the porta hepatis to the liver edge as shown in the present report. The gas is carried to the periphery of the liver by the centrifugal flow of portal radicals. In contrast, intrabiliary gas accumulates in the major biliary radicals due to the centripetal flow of bile. As in our first case, portal vein gas may be associated with pneumatosis intestinalis and intraluminal gas.[4] Williams[13] reported a case, known to be due to hemorrhage and mucosal edema, which demonstrated "thumb-printing" identical to that seen with contrast studies of the

colon in ischemic colitis. This case is similar to that of our second patient.

The pathogenesis of gas in the portal vein has been discussed by several authors. Wolfe and Evans[14] postulated that luminal gas under increased pressure passes through the bowel wall into the mesenteric vein and collects in the portal system. This was partially supported by Yeneman,[15] who produced pneumatosis intestinalis experimentally in cadavers by increasing the intraluminal gas pressure in the presence of mucosal ulceration. It has been postulated that gas-forming bacteria may cause gas in the portal vein. Furthermore, Marston[16] demonstrated in dogs that with protracted mesenteric arterial occlusion, gas may appear in the portal vein. Barlow and Santalli[17] emphasized the importance of hypoxia or hypothermia in initiating enterocolitis in the rat. Despite many theories, the pathogenesis remains obscure.

Few adult survivors with gas in the portal vein have been reported, despite the increased observance. Fred,[6] Pacuilli,[18] and Berne[5] have reported four surviving cases. In two of the survivors, enteric necrosis was not panmural. Therapy was nonoperative

4. Roentgenogram of the abdomen demonstrating air in the hepatic portal system (case 2). Inset shows "thumb-printing" in the descending and sigmoid colon.



in one survivor. Our two patients had long lengths of infarcted intestine with transmural necrosis, and underwent emergency surgical resections. The second patient survived more than two months, but died of other complications. Berne[5] believed that determinants for survival, when the syndrome develops secondary to low perfusion, include depth of mural necrosis, the linear extent of disease, and the nature of the underlying disease.

Since gas in the portal vein is most often the result of enteric necrosis, exploratory celiotomy should be considered immediately. We emphasize that the internist should be aware of the possibility of intestinal necrosis when air is seen in the portal system of the liver. Our first case demonstrates that these patients do not always appear to be acutely and seriously ill.

References

1. Wolfe JN, Evans WA: Gas in the portal veins of the liver in infants. A roentgenographic demonstration with postmortem anatomical correlation. Amer J Roentgenol 74:486-489, 1955.

2. Wayne ER, Burrington JD, Hutter J: Neonatal necrotizing entercolitis. Evolution of new principles in management. Arch Surg 110:476-480, 1975.

3. Santulli TV, Schullinger JN, Heird WC, et al: Acute necrotizing enterocolitis in infancy: a review of 64 cases. Pediatrics 55:376-387, 1975.

4: Susman N, Senturia HR: Gas embolization of the portal venous system. Amer J Roentgenol 83:847-850, 1960.

5. Berne TV, Meyers HI, Donovan AJ: Gas in the portal vein of adults with necrotizing enteropathy. Amer J Surg 120:203-209, 1970.

6. Fred HL, Mayhall CG, Harle TS: Hepatic portal venous gas. A review and report on six new cases. Amer J Med 44:557-565, 1968.

7. Wiot JF, Felson B: Gas in the portal venous system. Amer J Roentgenol 86:920-929, 1961.

8. Shaw A, Cooperman A, Fusco J: Gas embolism produced by hydrogen peroxide. New Engl J Med 277:238-241, 1967.

9. Fink DW, Boyden FM: Gas in the portal veins. A report of two cases due to ingestion of corrosive substances. Radiology 87:741-743, 1966.

10. Arnon RG, Fishbein JF: Portal vein gas in the pediatric age group. J Pediatr 79:255-259, 1971.

11. Stewart AM: The study of free gas in the foetus as a sign of intrauterine death. Brit J Radiol 34:187-193, 1961.

12. Lazar HP: Survival following portal venous air embolization: report of a case. Amer J Dig Dis 10:259-264, 1965.

13. Williams LF Jr, Bosniak MA, Wittenberg J, et al: Ischemic colitis. Amer J Surg 117:254-264, 1969.

14. Wolfe JN, Evans WA: Gas in the portal veins of liver in infants; roentgenographic demonstration with postmortem anatomical correlation. Amer J Roentgenol 74:486-489, 1955.

15. Yenerman M: Report to the Fifth Congress of Int. Comp. Anat., Istanbul, 1949.

16. Marston A: Causes of death in mesenteric arterial occlusion I. Local and general effects of devascularization of the bowel. Ann Surg 158:952-959, 1963.

17. Barlow B, Santulli TV: Importance of multiple episodes of hypoxia or cold stress on the development of enterocolitis in an animal model. Surgery 77:687-690, 1975.

18. Paciulli J, Jacobson G: Survival following roentgenographic demonstration of gas in the hepatic portal venous system. Amer J Roentgenol 99:629-631, 1967.

The authors, Medical and Radiology Services, Veterans Administration Hospital, University of Michigan Medical School, Ann Arbor, Mich.

Reprint requests to Dr Naus, 801 Road to Six Flags West, Arlington, TX 76012.

Information for authors

Texas Medicine is a scientific, clinical journal published primarily for members of the Texas Medical Association. In addition, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, coming meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Scientific Articles

Manuscripts should be typed double-spaced with ample margins on firm paper. Two copies should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

References

Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrative Material

Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously Published Material

Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with the manuscript.

Editorials

Editorials should be prepared in the same general manner, and should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the Managing Editor and consultants.

News

News items should be sent to the Editorial Offices, 1801 North Lamar Blvd., Austin 78701.

Continuing Education, Meetings

Continuing education courses and medical meetings are listed in each issue. Information about courses should include title, sponsor, location, dates, duration, fee, how many may enroll, for whom the course is designed, teaching methods, type and number of hours credit, and name and mailing address of a person to contact.

Information about meetings should include the name of the organization, place and inclusive dates, and name and mailing address of a person to contact. Program topics and names of speakers may be included as space permits.

Material should be submitted in writing six weeks before publication; for example, information for the June issue (published June 1) is needed by April 15.

Obituaries

Obituaries of deceased TMA members are published if adequate information is received within four months of date of death. When notifying the editors of a member's death, please give the name and address of next of kin.

Policy on Columns

Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Scientific Publication Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the Committee and the editors will consider development of a column.

Editing

All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints

Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright

Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the Managing Editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

Point of View

Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

What Makes A Hospital Great For Doctors?

- Doctor Management?
- A Growing Metropolitan Area?
- Close Linkage With Medical — Research Facilities?
- Constant Addition Of New Ideas, Young Ideas?
- All The Above?

We Think So!

That's why Pasadena Bayshore is the ideal place to begin your practice.

You'll help us continue to build greatness. You'll begin building your practice — your career — as you help the continued building of this 379 bed (soon to be 470 bed) hospital, situated in Pasadena, Texas — just north of the Space Craft Center — a few miles east of the Houston Medical Center.

Built by physicians, Bayshore has move-in options, services, and many special facilities designed to meet the individual physician's relocation needs. Check these advantages, then check with the Pasadena Bayshore Hospital.

- Ninety acre complex — space for growth.
- Ample office space presently available in modern, professional building.
- Importantly for young doctors — you are assured of an immediate practice. Talk with us about your income assurance during that first critical year.
- Lots available — room for your own office buildings.
- Doctor Management — doctors' needs are paramount.
- Highly-trained staff — superior general services.
- Specialized services and facilities — including nuclear medicine, obstetrics, cardiology (and psychiatry located in our separate Psychiatric Annex).
- For your convenience - answering service, full line of doctors' office supplies, and more.

For information call (713) 944-6666 EXT 221
Charles M. Cooper, Jr., Administrator

PASADENA BAYSHORE HOSPITAL

4000 Spencer Highway **Pasadena, Texas 77504**

A character all its own.

Valium (diazepam) is a benzodiazepine with a character all its own. Pharmacologically, it has been described as more potent mg-per-mg than other available anxiolytic benzodiazepines. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors, psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported, should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Results of the 1976 TMA professional liability insurance survey

Results of the 1976 Texas Medical Association Professional Liability Insurance Survey document the gravity of the medical malpractice insurance crisis in Texas and demonstrate that the efforts to resolve the crisis have not been totally successful.

In an effort to update the results of TMA's 1975 Professional Liability Insurance Survey, a second survey was conducted during the last four months of 1976. This report presents the results of the 1976 survey and makes appropriate comparisons with the results of the 1975 survey.

This presentation is divided into three sections:

(1) Profile of malpractice insurance carried by Texas physicians in 1976;

(2) Suit and claims experience of Texas physicians in 1976;

(3) Impact of the malpractice crisis on the physicians and the public in 1976.

PROFILE OF MALPRACTICE INSURANCE CARRIED BY TEXAS PHYSICIANS IN 1976

Ninety-five percent of all physicians had coverage in 1975, while only 92% had coverage in 1976, a 60% increase in one year in the number of physicians without insurance.

In 1976, 5.5% of the physicians in Texas did not have coverage because the premium cost was too high, 2% chose not to maintain coverage and .5% did not have coverage for other reasons.

A significant shift in the distribution of physicians by the amount of basic coverage occurred between 1975 and 1976 because of the availability in 1976 of a policy with limits not generally available prior to 1976.

During 1976, the Joint Underwriting Association (JUA), a statewide risk pool created by the 64th Session of the Texas Legislature to provide insurance for physicians who could not obtain insurance in the private market, moved into full operation.

The JUA, by its enabling legislation, cannot offer more than $300,000 in coverage, and in order to make available the maximum amount of insurance possible, chose to offer a $300,000/$300,000 policy, the more traditional $100,000/$300,000 policy, and other lower limits policies.[1]

The shift of a significant percentage of all physicians to the $300,000/$300,000 through the JUA reflects the general unavailability of coverage in amounts of $200,000/$600,000 or greater in the private market and the perception by physicians that basic coverage in amounts greater than $100,000/$300,000 is necessary.

A second shift in the medical malpractice insurance market between 1975 and 1976 is the dramatic decline of physicians in private practice with umbrella coverage of $1,000,000 or more for the 1970-76 period. During the 1970-74 period, the percentage of all physicians with umbrella coverage increased significantly, reflecting the belief that higher limits of coverage were necessary in view of the increasing frequency and severity of suits and claims being filed.

However, since 1974 these percentages have declined, reflecting the high costs and/or unavailability of umbrella coverage.

In 1975, 49% of all physicians in private practice had umbrella coverage of $1,000,000 or more, but in 1976, only 25% of the physicians had coverage in this amount, a 96% decrease in one year in the number of physicians with umbrella coverage.

The most significant shift in the distribution of physicians by insurance company was the percentage covered by the JUA. For physicians in private practice, .1% were covered by the JUA in the last quarter

[1]Basic coverage is written on the basis of specified coverage per suit or claim and aggregate coverage for all suits or claims filed during the policy year. For example, a basic policy of $100,000/$300,000 provides coverage up to $100,000 for any single suit or claim and up to $300,000 for all suits and claims filed during the policy year.

of 1975, but by the last quarter of 1976, 11% of all physicians in private practice were covered by the JUA.

Aetna's and Hartford's percentages declined as they proceeded with their withdrawal from the professional liability insurance market in Texas.

Medical Protective continues to be the single largest carrier, writing 62% of all basic policies for physicians in private practice in 1976.

From the data on the changes in the distribution of physicians by insurance company between 1975 and 1976, it is evident that the JUA is the primary source of insurance for physicians who must seek new sources of coverage.

Unless the statutory authority of the JUA is extended beyond December 1977, a serious availability crisis for basic coverage will exist for 35% to 40% of Texas physicians.

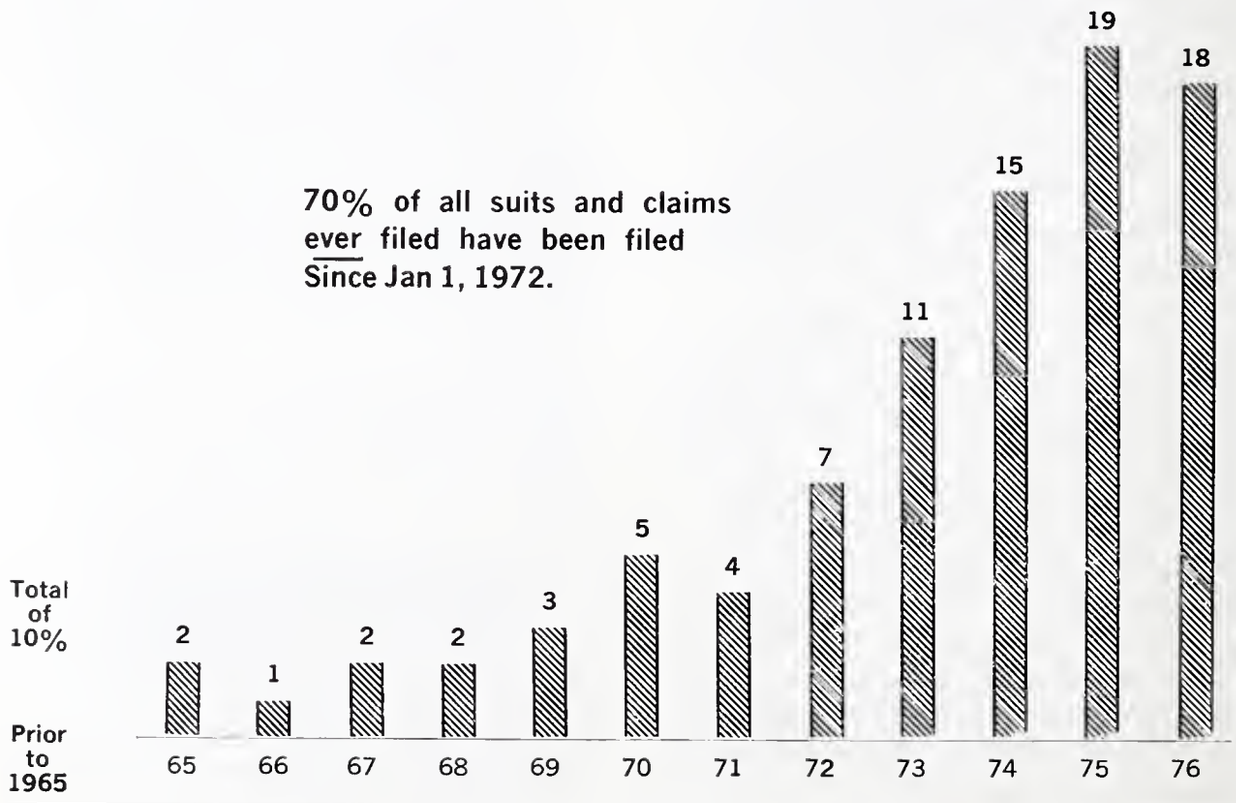
SUIT AND CLAIMS EXPERIENCE OF TEXAS PHYSICIANS IN 1976

Perhaps the most significant finding of the 1975 survey was that 60% of all reported suits and claims ever filed were filed between 1972 and 1975. The 1976 data reveals that 70% of all reported suits and claims ever filed were filed between 1972 and 1976 and that 37% of all reported suits and claims were filed during 1975 and 1976.

By comparison, only 30% of all reported suits and claims ever filed were filed in all years prior to 1972.

The two basic elements of the medical malpractice insurance crisis, the increasing frequency and severity of suits and claims filed, still exist in Texas and in certain instances there is evidence of acceleration in the trends identified in the 1975 survey.

PERCENTAGE DISTRIBUTION OF ALL SUITS OR CLAIMS EVER FILED BY YEAR FILED.



The percentage of suits and claims with multiple defendants continues to increase, from 50.7% of all suits and claims filed in 1970 to 61.1% of all suits and claims filed in 1976.

In 1976, 31% of all physicians reported they had had a suit or claim filed against them at some time during their professional career, as compared with 28% in 1975, 12.4% in 1963, and 10.1% in 1956.

The trend toward a larger percentage of all suits and claims seeking larger amounts of damages has continued, with 71.7% of all suits and claims filed in 1976 seeking $100,000 or more as compared with 58.7% of those filed prior to 1976.

During 1976, 42.5% of all suits and claims filed sought $300,000 or more in damages, an amount in excess of the amount of basic coverage held by 92% of all Texas physicians in 1976.

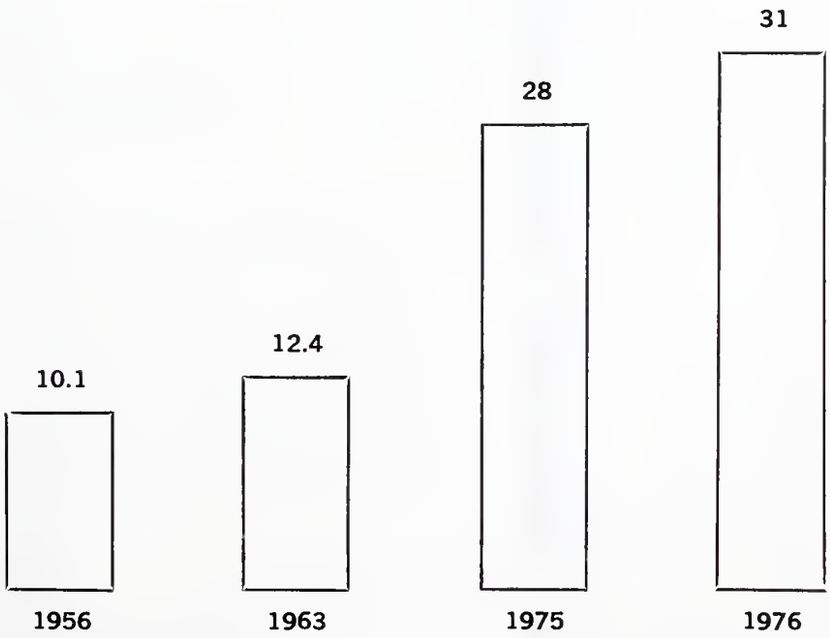
Large awards continue to have an impact on total dollars awarded far in excess of their percentage of all suits and claims with awards. While suits and claims with awards of $100,000 or more accounted for only 7.4% of the suits and claims in 1976 with awards, they accounted for 62.1% of all dollars awarded in 1976. This compares with 4.6% of suits and claims with awards in 1975 and 48.8% of the dollars paid.

IMPACT OF THE MALPRACTICE CRISIS IN TEXAS ON PHYSICIANS AND THE PUBLIC IN 1976

The continued acceleration of the medical malpractice insurance crisis during 1976 continued to affect the cost and availability of medical care.

The medical malpractice insurance crisis is having an impact on the cost of medical care directly through increases in physician's fees to pay higher premiums and through additional charges to patients for services (for example, ordering more lab tests and x-rays, greater use of consultants, and hospitalization) which may not be absolutely required, but which are performed to forestall the possibility of a suit or claim being filed or to provide a defense if a suit or claim is initiated.

PERCENTAGE OF TEXAS PHYSICIANS WHO HAVE HAD A SUIT OR CLAIM FILED AGAINST THEM DURING THEIR PROFESSIONAL CAREER



Data from the 1976 survey documents that increasing premiums are continuing to cause increases in physician's fees.

During 1976, 56% of the physicians in private practice indicated they raise their fees because of premium increases, as compared with 48% in 1975, and 20% in 1974. Physicians indicated a 10% increase in fees during 1976 due to premium increases, which follows increases of 11% in 1975 and 9% in 1974.

Physicians are being required by insurance companies to limit procedures performed to obtain insurance and are voluntarily limiting the scope of practice to avoid the possibility of a suit or claim.

The 1976 survey documents that the trend identified in the 1975 survey of family physicians getting out of the higher risk classes and into the lower risk classes has continued. This continued shifting of family physicians to lower risk classes means by definition that these physicians are providing a more limited range of services, a situation of critical importance to smaller communities. Limiting of services may mean higher costs to patients since other specialists generally charge more for certain services than do family physicians.

SUMMARY

During the last four months of 1975, the TMA conducted a survey of its membership to determine the depth and dimension of the medical malpractice insurance crisis in Texas.

The results of that survey documented that a medical malpractice insurance crisis does exist in Texas.

Both surveys have pinpointed the dramatic impact the medical malpractice insurance crisis is having on health care in Texas.

Results of the 1976 survey highlight the increasing frequency and severity of claims and suits filed, the costs of the malpractice insurance crisis to the public, and the increasing number of physicians insured by the JUA.

SUITS AND CLAIMS SEEKING $100,000 OR MORE

BY YEAR FILED

	Number	Percent
Prior to 1965	73	5.3%
1965	22	1.6%
1966	12	0.9%
1967	24	1.8%
1968	22	1.6%
1969	40	2.9%
1970	49	3.6%
1971	61	4.4%
1972	111	8.2%
1973	172	12.5%
1974	245	17.9%
1975	273	19.9%
1976	267	19.4%

KELSEY-SEYBOLD CLINIC

TEXAS MEDICAL CENTER ● 6624 FANNIN STREET ● HOUSTON, TEXAS 77030 ● AC (713) 797-1551

INTERNAL MEDICINE

Allergy
C. W. Ewing, M.D., F.A.C.A.
Arthritis and Rheumatic Diseases
J. W. Kemper, M.D., F.A.C.P.
M. S. Fischer, M.D.
Cardiology
E. F. Beard, M.D., F.A.C.P.
D. D. Goulden, M.D.
M. J. Mihalick, M.D.
Endocrine and Metabolic Diseases
M. P. Kelsey, M.D., F.A.C.P.
A. E. Leiser, M.D., F.A.C.P.
P. K. Champion, Jr., M.D., F.A.C.P.
Gastrointestinal Diseases, Endoscopy
J. R. Kelsey, Jr., M.D., F.A.C.P.
P. S. Bentlif, M.D., F.A.C.P.
R. D. Eichhorn, M.D., F.A.C.P.
F. S. O'Neil, M.D., F.A.C.P.
J. W. McBee, M.D., F.A.C.P.
General Internal Medicine
G. E. Burke, M.D.
C. F. Taboada, M.D., F.A.C.P.
N. H. Nauert, Jr., M.D.
G. G. Bourianoff, M.D.
Hematology
J. B. Bart, M.D., F.A.C.P.
Infectious Diseases
S. Riggs, M.D., F.A.C.P.
Nuclear Medicine
D. E. Mouton, M.D.
Oncology
E. N. Root, M.D.
Pulmonary Diseases, Bronchoscopy
S. P. Fischer, M.D., F.A.C.P.
B. D. Walker, M.D.

DERMATOLOGY

W. M. Fraser, M.D., F.A.A.D.
D. W. Owens, M.D., F.A.A.D.

GENERAL & THORACIC SURGERY

Surgical Endoscopy & Colonoscopy
W. D. Seybold, M.D., F.A.C.S.
J. D. McMurrey, M.D., F.A.C.S.
J. L. Doggett, M.D., F.A.C.S.
M. F. Appel, M.D., F.A.C.S.

NEUROLOGY

R. R. Pierce, M.D., F.A.A.N.
W. R. Seybold, M.D.

OBSTETRICS & GYNECOLOGY

M. L. Cody, M.D., F.A.C.S., F.A.C.O.G.
W. A. Johnson III, M.D., F.A.C.O.G.

OCCUPATIONAL & PREVENTIVE MEDICINE

M. B. Johnston, M.D., F.A.C.Pr.M.
H. B. Elwell, Jr., M.D.
R. M. Fenno, M.D., F.A.C.P.
F. A. Goss, M.D.
W. R. Hawkins, M.D., F.A.C.Pr.M.
W. R. Hein, M.D.
L. A. Herrmann, M.D.
G. F. Kelly, M.D., F.A.C.Pr.M.
J. Mackay, M.D.
C. A. Owen, M.D., F.A.C.S.
C. G. Petry, M.D.
B. W. Prior, M.D., F.A.C.Pr.M.
N. A. Tadros, M.D., F.A.C.Pr.M.
A. M. Wyss, M.D., F.A.C.Pr.M.
R. M. Boozer, M.D.

OPHTHALMOLOGY

H. E. Wahlen, M.D., D.A.B.O.
J. E. Key, II, M.D.

ORTHOPEDIC SURGERY

R. A. Fulford, M.D., F.R.C.S. (C)
T. H. Crouch, M.D., F.A.C.S.

OTOLARYNGOLOGY

J. C. Dickson, M.D., F.A.C.S.
J. L. Smith, M.D., F.A.C.S.
L. P. Conrad, M.D.

PATHOLOGY

R. A. Jordan, M.D., F.A.S.C.P.

PEDIATRICS

Rheumatology
E. J. Brewer, Jr., M.D., F.A.A.P.
Allergy and Pulmonary Diseases
C. W. Ewing, M.D., F.A.A.P.
Gastroenterology
G. D. Ferry, M.D., F.A.A.P.
General Pediatrics and Consultation
F. J. Boland, M.D., F.A.A.P.
R. M. Thaller, M.D., F.A.A.P.
K. C. Pinckard, M.D.

PSYCHIATRY

C. G. Cochran, M.D.
R. Daichman, M.D.

RADIOLOGY

R. J. Kurth, M.D., F.A.C.R.
E. G. Linares, M.D.
P. Raphael, M.D.

UROLOGY

D. W. Pranke, M.D., F.A.C.S.
F. M. Fry, M.D.

DENTISTRY

J. W. Orr, D.D.S.
D. L. McClung, D.D.S.

SPEECH PATHOLOGY & AUDIOLOGY

D. R. Fox, Ph.D.
J. W. Porter, M.A.
N. Shulak, M.A.

EXECUTIVE DIRECTOR

J. A. Bakken, F.A.C.M.G.A.

K-S POST OAK
Post Oak Tower Building, Suite 385
5051 Westheimer
Houston, Texas 77027
(713) 622-8340

K-S WEST
1900 Yorktown, Houston, Texas
77024 (713) 622-8211

K-S DOWNTOWN
Two Houston Center, Suite P-310
909 Fannin Street, Houston, Texas
77002 (713) 654-4401

Starlite Village Hospital

Center Point, Texas

Ph.: 634-2212
634-2213

- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

CHAMPUS APPROVED
JCAH: ACCREDITED.

Bank Financing for Physicians

We specialize in equipment leasing and financing, unsecured loans and lines of credit to Physicians And we handle it all by mail.

Unsecured loans with optional dollar amounts (to $10,000), optional payment schedules. Equipment leasing to give you tax advantages, restore operating capital, convert unused depreciation to cash. And lines of credit to provide for future cash needs.

We charge tax deductible bank rates. You won't spend any of your valuable time at your bank, and you'll reserve your regular bank credit for times when you really need it.

For further information, complete and mail this coupon today. I want to know more about:

— Unsecured Loans — Sale & Lease Back Plans
— A Line of Credit — Lease-Purchase Plans
— Equipment Leasing — Equipment Financing
— Other: _____

Dr. _____ Phone _____
Address _____
City _____ State ____ Zip _____

Professional Services Division
TEXAS BANK AND TRUST COMPANY
P. O. Box 101 Jacksonville, Texas 75766

***COMPULSION/ an irresistible impulse to perform an irrational act.**

Excessive drinking . . . leading to alcohol addiction . . . can't be controlled successfully unless the **compulsion** is destroyed.

Schick Hospital is a confirmed leader in modifying compulsive behavior and replacing it with **rational thinking and behavior.**

Aversive conditioning has been found to be the fastest, most effective means of breaking up compulsive drinking. Combined with rational behavior therapy, over half of the individuals who take a two-week re-education program never take nor feel the need to take another drink.

A 100% medically oriented program in a first class hospital fully accredited by the Joint Commission on Accreditation of Hospitals, and a Blue Cross-Blue Shield Member Hospital. Health and hospitalization insurance approved, including CHAMPUS.

SCHICK HOSPITAL

4101 Frawley Drive · Fort Worth, (D/FW Mid-Cities) 76118
Call for 24 hour information: Fort Worth (817) 284-9217 · Dallas (214) 589-0444

COMING SOON. Hospital programs for compulsive eaters and overweight individuals.
Hospital programs for compulsive smokers with pulmonary and cardiovascular disorders.

*Webster's New Collegiate Dictionary

MEDICINE AND THE LAW

SINKING OF THE "CAPTAIN OF THE SHIP" DOCTRINE

The "captain of the ship" doctrine has been scuttled by the Supreme Court of Texas.[1] According to the doctrine, a surgeon's mere presence in the operating room would make him liable as a matter of law (without the necessity of a jury finding) for negligence of other persons in the operating room.

In disapproving the doctrine, the Supreme Court of Texas concluded that for purposes of being held liable for someone else's negligence, surgeons and hospitals should be subject to ordinary principles of agency law.

Facts

A sponge had been left in Mrs Sylvia Caldwell's abdominal cavity during surgery. She sued the surgeon, C.F. Sparger, MD, and Worley Hospital.

Ruling

The jury's verdict absolved Dr Sparger of any negligence of his own, found negligence instead on the part of the circulating scrub nurses who were hospital employees, and declined to find that these nurses were "borrowed servants" by Dr Sparger. On this verdict the trial court rendered judgment against the hospital.

The Amarillo Court of Civil Appeals reversed the judgment,[2] holding Dr Sparger liable for the nurses' negligence under the "captain of the ship" doctrine.

The Supreme Court of Texas set aside the Amarillo Court's judgment and reinstated the trial court's judgment.

Discussion

The phrase, "captain of the ship," was used first in a medical malpractice context by the Pennsylvania Supreme Court in 1959. In naval parlance the captain of a ship is in total command, his authority over his own ship and crew is supreme. In legal concept the "captain of the ship" doctrine is a traditional basis for imposing vicarious liability on person A for person B's negligence in a situation where A controls, or has the right to control, B as to the subject matter of the negligence. (For example, the employer of a truck driver controls and/or has the right to control the driver and is liable for his negligent driving.) Thus, "captain of the ship" has a colorful ring to it as an apt analogy to a surgeon in an operating room and a supposed rationale for holding the surgeon liable for negligence of involved hospital employees.

But, as noted in the Texas Supreme Court's majority opinion: "Similes sometimes help to explain a factual situation, but in legal writing, phrases have a way of being canonized and of growing until they can stand and walk independently of the usual general rules. Mr Justice Frankfurter once wrote concerning such phrase-making in judicial opinions: 'The phrase . . . is an excellent illustration of the extreme to which uncritical use of words bedevils the law. A phrase begins life as a literary expression; its felicity leads to its lazy repetition; and repetition soon establishes it as a legal formula, undiscriminatingly used to express different and sometimes contradictory ideas.' "

Whether or not original judicial intent of the "captain of the ship" doctrine was to extend the ordinary "borrowed servant" principle that applies generally in the law of agency, the Texas Supreme Court has determined that surgeons should be subject to that usual rule.

Texas has long recognized that a general employee of one employer may become the "borrowed servant" of another. (Back to the truck driver example, employer B may "borrow" a driver from employer A and have a temporary right to control his driving.)

Under the "borrowed servant" doctrine, the essential inquiry would be whether

or not the surgeon had the right to control the assisting nurses in the details of the specific act raising the issue of liability (such as the sponge count). This kind of inquiry is ordinarily a question of fact for jury resolution under the evidence of the particular case.

Conclusion

The Sparger decision is good law. It rejects the proposition that a surgeon's mere presence renders him vicariously liable for negligence of hospital employees in the operating room.

The surgeon's liability for negligence should depend, and now under Texas law will depend, upon a jury finding in each case as to whether, in effect, the surgeon controlled, or had the right to control, the involved hospital employee.

Details and particulars of evidence may vary somewhat from case to case. In Dr Sparger's case the duties of the circulating scrub nurses were detailed in Worley Hospital's Policy and Procedure Manual. The sponge count procedures set forth in the manual were intended for use regardless of who the surgeon was.

In his testimony Dr Sparger repeatedly made the distinction that he was in charge of the medical aspects of the surgery. The nurses' testimony confirmed that Dr Sparger neither directed them to make, nor how to perform, the sponge count.

Texas has now charted a sound course, eliminating the "captain of the ship" notion as a false issue in this context. The ruling leaves for trial as an ordinary fact the question of whether hospital employee nurses assisting in an operation are "borrowed servants" of the surgeon.

Jack D. Maroney, Will G. Barber
Brown, Maroney, Rose, Baker & Barber
TMA Legal Counsel

[1] *Sparger v. Worley Hospital, et al.*, No. B-5721, 14 Texas Supreme Court Journal 143 (January 12, 1977). Majority opinion by Justice Jack Pope; dissenting opinion by Justice Sam Johnson.
[2] *Worley Hospital, Inc. v. Caldwell, et al.*, 529 S.W.2d 639 (Amarillo Civ. App. 1975).

After 37 years in downtown Dallas . . .

SURGICAL GARMENT SHOP

Now in a new, more complete home at the Garland Medical Tower

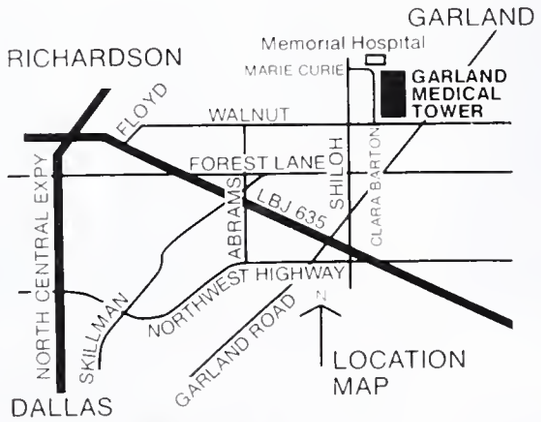
Our Medical Arts Building retail store has been moved to a new and expanded home which is more convenient to the homes of our customers. Now located on the 1st floor of the beautiful Garland Medical Tower with free parking at our door, we are able to offer physicians and customers alike even greater service. Midway between Richardson and Garland, we are located just minutes off LBJ Freeway or North Central Expressway providing easy access to anywhere in Dallas.

Prescription fittings and store operations are professionally supervised by Miss Linda Ellis, Certified Technician. Capable assistance provided for precise, personalized fittings for men and women. Individual records maintained for future re-orders either in person or by telephone.

Our inventory of the finest garments, supports, prostheses and braces will be the most complete in the metroplex area.

Headquarters for —

- Camp Supports
- Camp Brassieres
- Breast Forms for After Surgery
  - By Tru-Life and Thy-Self
- Style Girdles
- Elastic Stockings
- and many other quality products



(formerly at Medical Arts Bldg. 1st Floor)

SURGICAL GARMENT SHOP — New Location

GARLAND MEDICAL TOWER / Suite 101 (214) 494-2361
530 CLARA BARTON BLVD., GARLAND, TEXAS 75402

Telephone and Mail Reorders Welcome

Medical Newsmakers

Phala A. Helm, MD

PHALA A. HELM, MD, has been named permanent chairman of the Department of Physical Medicine & Rehabilitation at The University of Texas Southwestern Medical School in Dallas. A Southwestern faculty member since 1970, Dr Helm had been acting chairman since 1972. Dr Helm has worked in development of cancer and burns rehabilitation programs in Dallas. Dr Helm is also chief of physical medicine and rehabilitation services at Parkland.

FRANCIS C. JACKSON, MD, professor and chairman of surgery at the Texas Tech University School of Medicine, has been elected to membership in the Southern Surgical Association. The association is a scientific and social organization of surgeons in the southern United States.

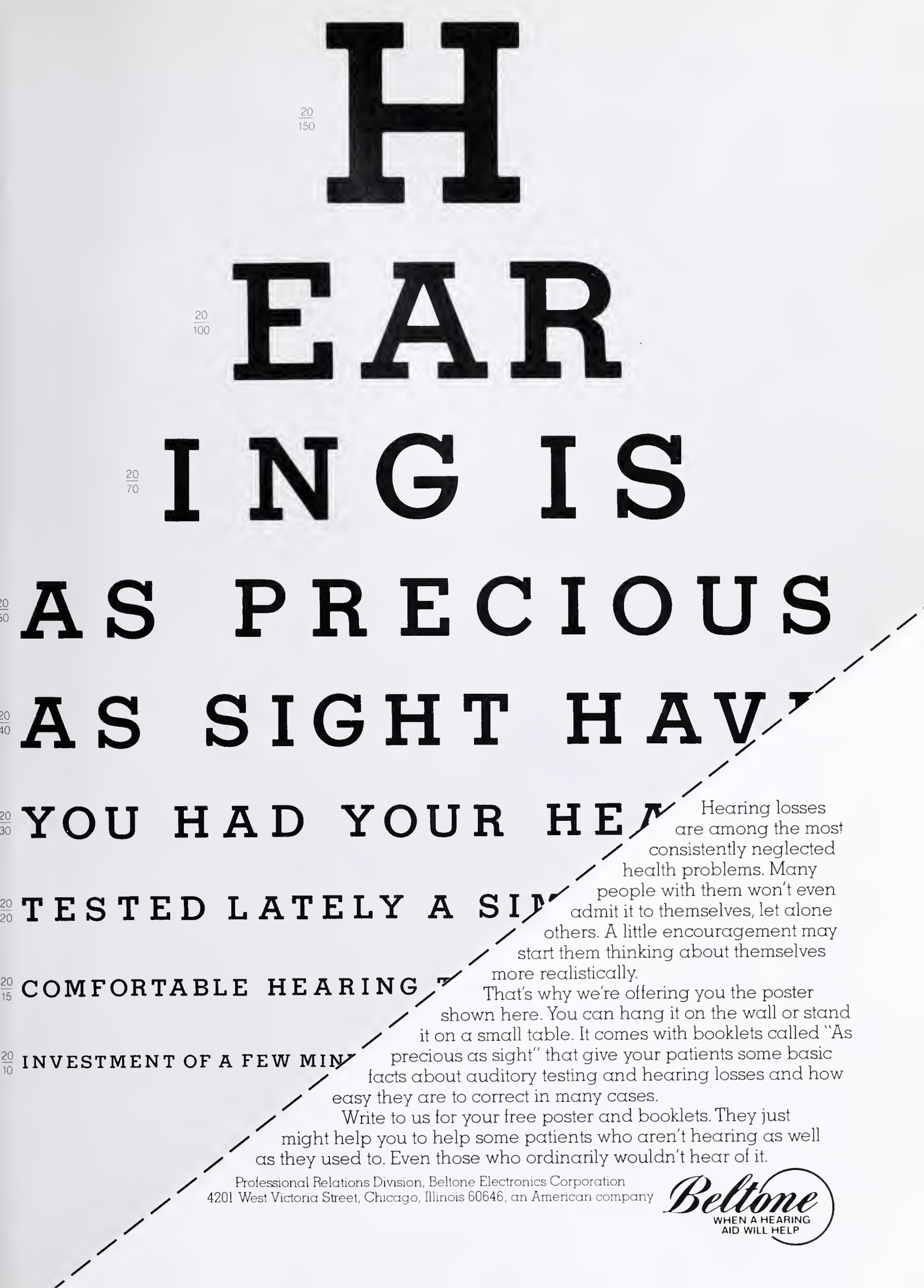
Carmault B. Jackson, MD

Three major appointments to the staff of The University of Texas M.D. Anderson Hospital and Tumor Institute in Houston have been announced. They are CARMAULT B. JACKSON, MD, director for extramural programs; WARREN L. RUTHERFORD, hospital administrator; and GERALD P. BODEY, MD, medical director of the Clinical Research Center. Dr Jackson, who has been in private practice in the fields of cancer and blood diseases in San Antonio, will be responsible for directing a wide range of community outreach and professional education programs conducted by M.D. Anderson. Rutherford, associate administrator of the hospital since 1961, assumes the post of chief administrator. Dr Bodey, who has been on the staff since 1966, will direct the 42-bed Clinical Research Center, where the latest research findings are used in developing new methods for better patient care.

P. CLIFT PRICE, MD, has been named Director of the Bureau of Personal Health Services of the Texas Department of Health Resources. Dr Price was formerly in the private practice of pediatrics in Austin.

Gerald P. Bodey, MD

MARC GARZA, MD, Dallas, is the new president of the Texas Society of Pathologists. Other new officers include JOHN D. MILAM, MD, Houston, president-elect; JOHN A. WEBB, MD, Houston, vice president; and ELEANOR S. IRVINE, MD, Wichita Falls, secretary-treasurer. The society has presented the George T. Caldwell Award to J. R. RAINEY, MD, Austin. The award is presented annually to a medical scientist of Texas for distinguished service to pathology.



Hearing losses are among the most consistently neglected health problems. Many people with them won't even admit it to themselves, let alone others. A little encouragement may start them thinking about themselves more realistically.

That's why we're offering you the poster shown here. You can hang it on the wall or stand it on a small table. It comes with booklets called "As precious as sight" that give your patients some basic facts about auditory testing and hearing losses and how easy they are to correct in many cases.

Write to us for your free poster and booklets. They just might help you to help some patients who aren't hearing as well as they used to. Even those who ordinarily wouldn't hear of it.

Professional Relations Division, Beltone Electronics Corporation
4201 West Victoria Street, Chicago, Illinois 60646, an American company

Beltone
WHEN A HEARING AID WILL HELP

WHEN
BURNING PAIN
COMPLICATES
ACUTE
CYSTITIS*

TURN IT OFF WITH

AZO GANTANOL®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

FOR THE PAIN

- Quickly relieves painful symptoms such as burning and pain associated with urgency and frequency.
- Recommended antibacterial therapy: up to 3 days with Azo Gantanol, then 11 days with Gantanol (sulfamethoxazole).

FOR THE PATHOGENS

- Effectively controls susceptible pathogens such as *E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris.*

*nonobstructed; due to susceptible organisms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis,* and, less frequently, *Proteus vulgaris)* in the absence of obstructive uropathy or foreign bodies.

Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

Warnings: Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *G.I. reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Azo Gantanol is intended for the acute, painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

NOTE: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine.

Supplied: Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

ROCHE

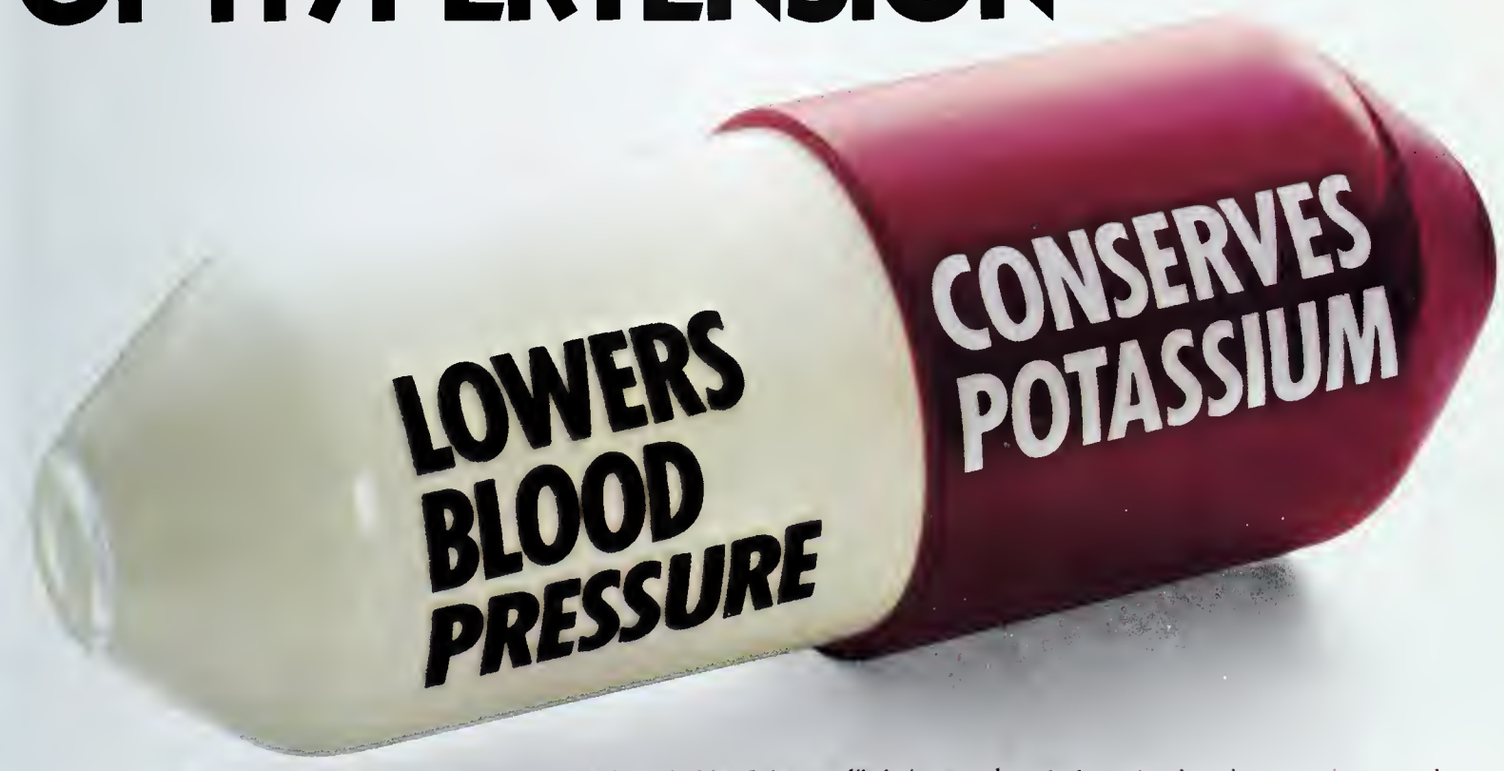
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

DYAZIDE®

Trademark

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE FOR LONG-TERM CONTROL OF HYPERTENSION*



Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* WARNING
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the fixed combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium-sparing action of its 'Dyrenium' component is warranted.

Contraindications: Further use in progressive renal or hepatic dysfunction; hyperkalemia. Preexisting elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs. Routine use of diuretics in otherwise healthy pregnancy.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in severely ill patients with urine volume less than one liter/day, the elderly or diabetics, with suspected or confirmed renal insufficiency. Periodic determinations of serum K^+ should be made. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **The presence of a widened QRS complex or arrhythmia in association with hyperkalemia requires prompt additional therapy.** Thiazides are reported to cross the placental barrier and appear in breast milk; fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and other adverse reactions that have occurred in the adult may result. When used in pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics, or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium® (triamterene, SK&F Co.), and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Do periodic blood studies in cirrhotics to check for nondrug-related variations in blood pictures, and in patients with folic acid depletion, since 'Dyrenium' may contribute to appearance of megaloblastosis. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

SK&F CO., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

BURROUGHS WELLCOME CO. MAKES CODEINE COMBINATION PRODUCTS.

YOU MAKE THE CHOICE.

EMPIRIN® COMPOUND c̄ CODEINE #3

Each tablet contains:
codeine phosphate, 32 mg (gr ½),
(Warning: May be habit-forming);
aspirin, 227 mg; phenacetin, 162 mg;
and caffeine, 32 mg.

EMPRACET™ c̄ CODEINE #3

Each tablet contains:
codeine phosphate, 30 mg (gr ½),
(Warning: May be habit-forming);
and acetaminophen 300 mg.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Texas medicine is in danger.

New pamphlets from TMA can gain support for needed malpractice insurance legislation—but only if you order them.

These new pamphlets can help get meaningful legislation passed. Thousands of people have sent in coupons from TMA's previous pamphlet. This new one can be just as successful.

Table display with pamphlet holder

Give patients a chance to support SB 103 and HB 370. Put pamphlets in statements, waiting rooms and hospitals. Pass them out at meetings or use them many other ways.

An 8½ x 11 inch display card with a holder for pamphlets also is available. It's the same successful holder offered last year. If you already have one, just put in new pamphlets. You can fold out the attached brace for tabletop use. Or hang the attractive gray and white holder on a wall.

See enclosed pamphlet sample. Then use this easy order form.

TO: Communication Department
Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

Yes, I want to help tell people about the "malpractice insurance" crisis and the legislation needed to resolve it. Please send, free of charge:

_____ Pamphlets—"Texas Medicine is in Danger."
(No.)

_____ Table display(s) with pamphlet holder. Supply is limited on this item. It is identical to the one offered last year.
(No.)

Send to:
(print or type)

_____
(Name)

_____
(Address)

_____
(City, state, zip)

Medicine in literature

EDITOR'S NOTE: This month's bibliography, prepared by the staff of TMA's Memorial Library, lists publications related to thyroid neoplasms and radiation. These and other publications pertaining to this topic are available from the Memorial Library.

THYROID NEOPLASMS AND RADIATION

Becker FO, Economou SG, Southwick HW, et al: Adult thyroid cancer after head and neck irradiation in infancy and childhood. *Ann Intern Med* 83:347-351, 1975.

Block MA, Miller MJ, Horn RC Jr: Carcinoma of the thyroid after external radiation to the neck in adults. *Am J Surg* 118: 764-769, 1969.

Conard RA, Dobyns BM, Sutow WW: Thyroid neoplasia as late effect of exposure to radioactive iodine in fallout. *JAMA* 214 (2):316-324, 1970.

DeGroot L, Paloyan E: Thyroid carcinoma and radiation; a Chicago endemic. *JAMA* 225(5):487-491, 1973.

Duffy BJ, Fitzgerald PJ: Thyroid cancer in childhood and adolescence; a report on twenty-eight cases. *Cancer* 3:1018-1032, November 1950.

Foster RS Jr: Thyroid irradiation and carcinogenesis; review with assessment of clinical implications. *Am J Surg* 130:608-611, November 1975.

Fuks A, Glatstein E, Marsa GW, et al: Long-term effects of external radiation on the pituitary and thyroid glands. *Cancer* 37(2) (suppl):1152-1161, 1976.

Hempelmann LH, Pifer JW, Burke GJ, et al: Neoplasms in persons treated with X-rays in infancy for thymic enlargement. A report of the third followup survey. *J Natl Cancer Inst* 38:317-341, 1967.

Parker LN, Belsky JL, Yamamoto T, et al: Thyroid carcinoma after exposure to atomic radiation; a continuing survey of a fixed population, Hiroshima and Nagasaki, 1958-1971. *Ann Intern Med* 80:600-604, 1974.

Pifer JW, Hempelmann LH: Radiation-induced thyroid carcinoma. *Ann NY Acad Sci* 114(pt 2):838-848, 1964.

Pincus RA, Reichlin S, Hempelmann LH: Thyroid abnormalities after radiation exposure in infancy. *Ann Intern Med* 66: 1154-1164, 1967.

Refetoff S, Harrison J, Karanfilski BT, et al: Continuing occurrence of thyroid carcinoma after irradiation to the neck in infancy and childhood. *N Engl J Med* 292 (4):171-175, 1975.

Saenger EL, Silverman FN, Sterling TD, et al: Neoplasia following therapeutic irradiation for benign conditions in childhood. *Radiology* 74(6):889-904, 1960.

Safa AM, Schumacher P, Rodriguez-Antunez A: Long-term follow-up results in children and adolescents treated with radioactive iodine (^{131}I) for hyperthyroidism. *N Engl J Med* 292(4):168-171, 1975.

Tristan TA: Over-concern can equal hysteria—thyroid cancer. *Pa Med* 79(2): 49-51, 1976.

IN THE TMA LIBRARY

Ackerman LV, Rosai J: *Surgical Pathology*, ed 5. St Louis, CV Mosby Co, 1974.

Adams, JR Jr, Mader RD: *Autopsy*. Chicago, Year Book Medical Publishers, Inc, 1976.

Adamsons K, Fox HA (eds): *Preventability of Perinatal Injury*. New York, Alan R Liss, Inc, 1975.

Barber HRK, Graber EA: *Surgical Disease in Pregnancy*. Philadelphia, WB Saunders Co, 1974.

Beck K, Dischler W, Helms M, et al: *Color Atlas of Endoscopy and Biopsy of the Intestine,* Meissner GF (trans-ed). Philadelphia, WB Saunders Co, 1975.

Busse EW, Pfeiffer E (eds): *Mental Illness in Later Life*. Washington, DC, American Psychiatric Association, 1973.

Collins VJ: *Principles of Anesthesiology,* ed 2. Philadelphia, Lea & Febiger, 1976.

Craig TT (ed): *The Medical Aspects of Sports: 16*. Chicago, American Medical Association, 1974.

Duffin J: *Physics for Anaesthetists*. Springfield, Ill, Charles C Thomas, 1976.

Fries JF, Holman HR: *Systemic Lupus Erythematosus: A Clinical Analysis, VI*. Philadelphia, WB Saunders Co, 1975.

Gates GF: *Radionuclide Scanning in Cyanotic Heart Disease*. Springfield, Ill, Charles C Thomas, 1974.

Gray H: *Anatomy of the Human Body,* ed 29, Goss CM (ed). Philadelphia, Lea & Febiger, 1975.

Greenfield LJ: *Surgery in the Aged, XVII*. Philadelphia, WB Saunders Co, 1975.

Harley RD (ed): *Pediatric Ophthalmology*. Philadelphia, WB Saunders Co, 1975.

Holden HB (ed): *Practical Cryosurgery*. Chicago, Year Book Medical Publishers, Inc, 1975.

Huestis DW, Bove JR, Busch S: *Practical Blood Transfusion,* ed 2. Boston, Little, Brown & Co, 1976.

Irby WB (ed): *Facial Trauma and Concomitant Problems*. St Louis, CV Mosby Co, 1974.

Keats TE: *An Atlas of Normal Roentgen Variants That May Simulate Disease*. Chicago, Year Book Medical Publishers, Inc, 1975.

Kelly S, Hook EB, Janerich DT, et al (eds): *Birth Defects*. New York, Academic Press, Inc, 1976.

Krugman S, Gershon AA (eds): *Infections of the Fetus and the Newborn Infant*. New York, Alan R Liss, Inc, 1975.

Plunkett ER: *Handbook of Industrial Toxicology*. New York, Chemical Publishing Co, Inc, 1976.

Raffle A (ed): *Medical Aspects of Fitness to Drive*. London, Medical Commission on Accident Prevention.

Roenigk HH, Young JR: *Leg Ulcers*. Hagerstown, Md, Harper & Row, 1975.

Vaughan VC III, McKay RJ, Nelson WE (eds): *Nelson Textbook of Pediatrics*, ed 10. Philadelphia, WB Saunders Co, 1975.

"Your medical school has lost accreditation and you are being recalled."

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

J.E. GOODNIGHT
San Antonio, 1906-1976

J.G. LIGON
Houston, 1889-1976

R.S. MacINTYRE
Houston, 1912-1976

C.W. PEMBERTON
Houston, 1891-1976

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

TEXAS MEDICAL MEMORIAL LIBRARY FUND

1801 N. Lamar Blvd., Austin, Texas 78701

I enclose the amount of $_____. Given in Memory of_____

Please send remembrance card to:

Name _____

Address _____

City and State _____

Donor Information:

Name _____

Address _____

City and State _____

Deaths

J. E. Goodnight, MD

Dr James Edgar Goodnight, 1975 recepient of Baylor Medical Alumni Association's Distinguished Alumnus Award, died Aug 27, 1976.
Dr Goodnight, 70, was a retired family physician. He had been a San Antonio resident since 1949. He received his MD degree in 1930 from Baylor College of Medicine, served his internship at Parkland Memorial Hospital, Dallas, and completed his residency at St Luke's Hospital of Newburgh (New York).
In the mid-1930's, Dr Goodnight practiced in Wink, Longview and Pearsall, Tex. He served as director of student health at Washington State College, Pullman, Wash, before coming to San Antonio.
Dr Goodnight was a member of Bexar County Medical Society and the American Medical Association.
Surviving the physician are his wife, Anna Claire Greer Goodnight, San Antonio; son, James E. Goodnight, Jr, Santa Monica, Calif; daughters, Claire Boland, Monterey, Calif; Mary Amis, Marietta, Ga; and Elizabeth Goodnight, San Antonio; three sisters and two grandchildren.

J. G. Ligon, MD

Dr Joseph Grady Ligon, 86, died Sept 10, 1976, in Houston.
Dr Ligon, who was born in Mississippi, had lived in Houston 57 years. He retired from practice in 1950.
The physician attended Mississippi College, Clinton, Miss, before entering the University of Tennessee College of Medicine. He received his MD degree in 1916. He served internships at St Joseph Hospital and the US Marine Hospital, both in Memphis. Before moving to Houston, Dr Ligon practiced in Memphis one year.
He was elected to honorary membership in Texas Medical Association in 1951, and also was a member of Harris County Medical Society.
Surviving Dr Ligon are his wife, Luray Studebaker Ligon, Houston; son, William G. Ligon, Memphis; sister, Mrs Dewey Betterton, Grenada, Miss; and a number of nieces and nephews.

Dr Ligon

Dr MacIntyre

R. S. MacIntyre, MD

Dr Robert Shaw MacIntyre, 63, professor and chairman of the Radiology Department, Baylor College of Medicine, Houston, died Aug 2, 1976. Cause of death was a heart attack.
In addition to his position at Baylor, Dr MacIntyre was chief of radiology at Methodist, Ben Taub General and Jefferson Davis hospitals.
A native of Milan, Mich, he attended the University of Michigan, Ann Arbor. After receiving his MD in 1938, Dr MacIntyre remained at the university to undertake an internship and residency. He moved to Houston in 1952.
Dr MacIntyre, the author of numerous scientific publications, was a past president of the American Cancer Society's Harris County Unit. His professional memberships included Harris County Medical Society, American Medical Association, Houston Radiological Society, Texas Radiological Society, American College of Radiology and American Roentgen Ray Society. He also was a member of Nu Sigma Nu fraternity.
Survivors include his wife, Barbara Linehan MacIntyre, Houston; sons, Jim MacIntyre, Paul B. MacIntyre and Robert S. MacIntyre, Jr, all of Houston; daughter, Marcia Schilling, Anchorage, Alaska; and sister, Nina MacConnell, St Petersburg, Fla.

Dr Pemberton

C.W. Pemberton, MD

Dr Charles Whitaker Pemberton, a prominent Houston physician, died Sept 11, 1976, at the age of 84.

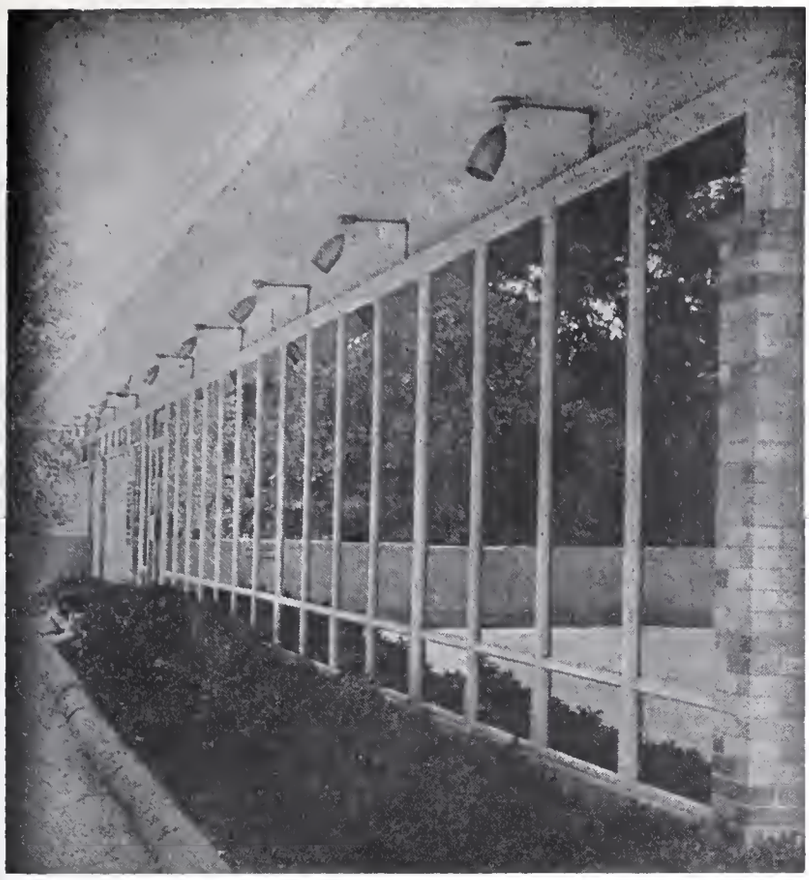
Dr Pemberton was the first black to serve in the Houston Independent School District's Health Department, and became assistant director during his 37 years there. He also was a former director of medical service for the International Longshoremen's Association, president of the Lone Star State Medical Association, vice-president of the National Medical Association, member of the governing council of the American School Health Association and delegate to two World Health Assemblies.

In 1966, Dr Pemberton attended the celebration of the 119th anniversary of the founding of the West African Republic of Liberia. While there he was enrolled as a Knight Commander of the Humane Order of African Redemption. He formerly was consul for the Republic of Liberia.

Dr Pemberton received his BA degree from Wiley College in Marshall, Tex, his home town. He received his MD from Meharry Medical College, Nashville, Tenn. After completing his internship at St Louis City Hospital in 1924, Dr Pemberton moved to Houston. He later undertook post-graduate studies in Public Health at the University of Michigan, Ann Arbor.

Dr Pemberton, a veteran of World War I, was a member of Harris County Medical Society and the Houston Medical Forum. He also was founder of the Houston chapter of Kappa Alpha Psi Fraternity and co-founder of Sigma Pi Phi Fraternity. He was a member of Crispus Attucks Lodge Number 317, Prince Hall Affiliation.

Surviving Dr Pemberton are his wife, Doris Hollis Pemberton, JD; son, Ogden Hollis Pemberton; daughters, Phillipia Charles Pemberton and Stephania Pemberton Palmer, all of Houston; three sisters and one granddaughter.



BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT-OUTPATIENT
DEPARTMENT OF ADOLESCENT PSYCHIATRY

A Private 115 bed psychiatric hospital located in Oak Cliff on 18 acres amidst natural wooded surroundings. A multi-approach treatment center of neurologic and all psychiatric disorders. Treatment modalities include Somatic Therapy, Milieu Therapy, Chemotherapy, Individual and Group Therapy and Behavior Modification. Complete facilities for OT-RT under the division of trained personnel. An individually directed program based on full diagnostic evaluation and actual performance administered by a staff skilled in special education and problems of the adolescent and young adult.

PSYCHIATRY

Jackson H. Speegle, M.D.
Fred H. Jordan, M.D.

Joseph H. Lindsay, M.D.
John T. Holbrook, M.D.

PSYCHOLOGY

George R. Mount, Ph.D.

Tom I. Payton, M.S.
Patrick R. Barnes, M.S.

DIRECTOR OF NURSES
Nita Ivey, R.N.

DIRECTOR OF EDUCATION
William E. Nix, Ph.D.

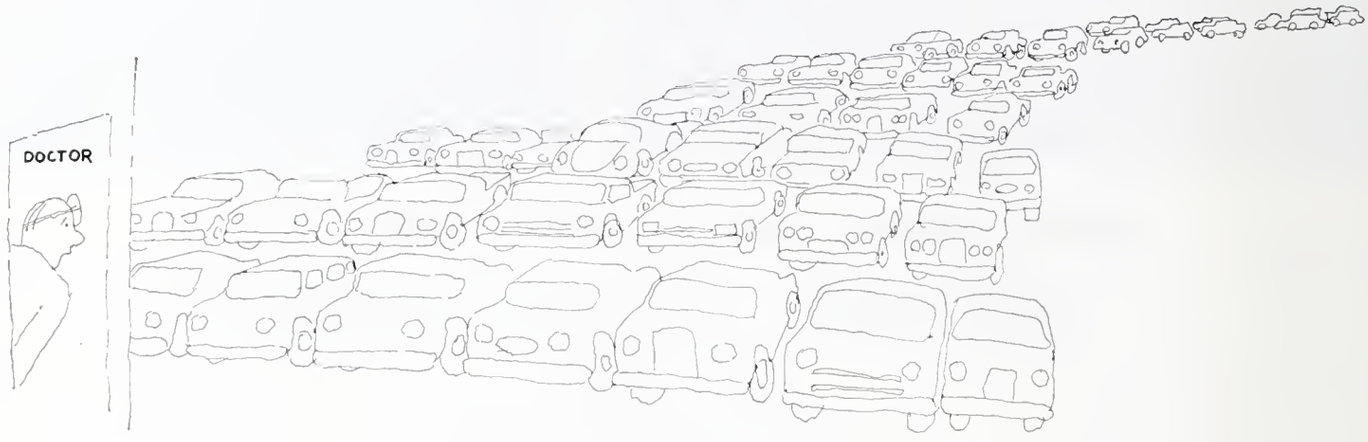
SOCIAL SERVICES
Beth Rutherford, M.S.W.

COURTESY STAFF

O.T. AND R.T. THERAPY
Director
Chequita Dian Badger, B.S.

1353 N. WESTMORELAND AVENUE. DALLAS, TEXAS 75211 **214 331-8331**

OPEN WIDE AND SAY . . .



AAAHHHHHHHH!

We've got more cars than you can shake a thermometer at. Any model, any make — American or foreign. You just choose the car you want. Load it up with all the extras. Then we'll make the leasing arrangements. All you have to do is get in and drive it away.

Why else should you lease from us?

- Low lease cost
- Tax write-offs
- Positive cash flow
- No record keeping necessary
- Custom-tailored leases
- Total maintenance of Lincoln-Mercury products.

Texas Medical Association Automobile Lease Program

Underwritten by:

Bankston Rentals, Inc. • 4747 LBJ Freeway • Dallas, Texas 75234 •214/233-1441
Southwest Motor Leasing, Inc. • 6737 Southwest Freeway • Houston, Texas 77074 • 713/777-3816

WELCOME TO HOUSTON

1977 ANNUAL SESSION MAY 12-15, HOUSTON
TEXAS MEDICAL ASSOCIATION

FEATURING

52 GUEST SPEAKERS plus 350 special and TMA-member speakers

21 SECTION PROGRAMS: Allergy, Colon and Rectal Surgery, Digestive Diseases, Diseases of the Chest, Family Practice, Internal Medicine, Neurology, Neurological Surgery, Nuclear Medicine, Obstetrics and Gynecology, Ophthalmology, Otolaryngology, Pathology, Pediatrics, Physical Medicine and Rehabilitation, Plastic, Reconstructive and Maxillofacial Surgery, Psychiatry, Public Health, Radiology, Surgery, Urology.

AMA-TMA POSTGRADUATE COURSES Scheduled Sunday, May 15, 8 a.m.-1 p.m. Each course acceptable for five hours Category 1 credit, AMA Physician's Recognition Award. Fee: $55. (Registration information will be sent to membership in separate mailing.)

Acid-Base, Fluid and Electrolyte Balance • Cardiovascular Disease—Diagnosis, Management of Acute Patient • Office Dermatology • Office Gynecology • Office Orthopaedics • Pediatric Emergencies

20 CURBSTONE CONSULTATIONS Person-to-person conversational discussions of cases and problems of general medical interest.

13 CONTINENTAL BREAKFAST PRESENTATIONS Join guest speakers for coffee, rolls, and short lectures Friday and Saturday mornings. Then participate in the informal half-hour discussion period following.

30 SPECIALTY SOCIETY PROGRAMS • 8 SPECIAL COMMITTEE SYMPOSIUMS • 160 SCIENTIFIC AND TECHNICAL EXHIBITS • FORUM OF ORIGINAL RESEARCH • PHYSICIANS' AND SPOUSES' ART EXHIBITION

SPORTS/ENTERTAINMENT Golf, Tennis, Fraternity and Alumni Parties, Class Reunions.

An Evening at the Cabaret. A Dinner Theater for members and guests of TMA Friday, May 13. Dinner in the Shamrock Hilton Emerald Room at 8 p.m. A musical at 9:30 p.m. in the hotel's new Cabaret Theater.

ADVANCE REGISTRATION FORM—FILL OUT BOTH SIDES AND MAIL TODAY

Save time and effort by registering in advance. Fill out the card at the right, mail it to TMA, and your registration packet will be waiting for you. There is no registration fee for TMA members. Registration materials may be picked up at the Shamrock Hilton Hotel, the Houston Marriott Hotel, or the Holiday Inn Medical Center.

A form for ordering tickets to the General Meeting Luncheons, the Dinner Theater, and other events is located on the back of this advance registration card. Save time by ordering your tickets now.

NAME_____

ADDRESS_____

CITY OF RESIDENCE_____

SPECIALTY_____

CONVENTION ADDRESS_____

_____

COUNTY SOCIETY_____

I shall pick up my convention materials at:

☐ Shamrock Hilton Hotel

☐ Houston Marriott Hotel

☐ Holiday Inn Medical Center

Mail to: Texas Medical Association
1801 North Lamar Blvd., Austin, Texas 78701

TO SAVE TIME AND ASSURE YOUR TICKET RESERVATION, USE ADVANCE TICKET ORDER FORM ON OTHER SIDE AND RETURN PRIOR TO APRIL 25.

PLEASE CHECK THE APPROPRIATE SPACES BELOW

☐ MEMBER PHYSICIAN
☐ NON-MEMBER PHYSICIAN
☐ INTERN OR RESIDENT
☐ MEDICAL STUDENT
☐ MEMBER SPEAKER
☐ SCIENTIFIC EXHIBITOR
☐ PRESIDENT, COUNTY MEDICAL SOCIETY
☐ DELEGATE
☐ ALTERNATE DELEGATE
☐ COUNCILOR
☐ VICE COUNCILOR
☐ TMA COUNCIL CHAIRMAN
☐ GUEST REPRESENTING

_____

_____

_____

CONTINENTAL BREAKFAST PRESENTATIONS

Reserve your tickets with card below.

Friday, May 13, 8:15-9:30 a.m.

1. HEADACHES: THEIR DIAGNOSIS AND TREATMENT
   Abe B. Baker, M.D.
   Minneapolis, Minnesota
2. THE STATUS OF T AND A, 1977
   Charles D. Bluestone, M.D.
   Pittsburgh, Pennsylvania
3. OBESITY
   George F. Cahill, Jr., M.D.
   Boston, Massachusetts
4. MANAGEMENT OF TUMORS OF THE MAJOR SALIVARY GLANDS
   Edgar L. Frazell, M.D.
   San Antonio, Texas
5. WHAT'S NEW IN ANTIBIOTIC THERAPY?
   Robert G. Petersdorf, M.D.
   Seattle, Washington
6. TRANSCUTANEOUS STIMULATION AND OTHER METHODS OF PAIN CONTROL, INCLUDING ACUPUNCTURE
   George W. Waylonis, M.D.
   Columbus, Ohio

Saturday, May 14, 8:15-9:30 a.m.

7. DIFFERENTIAL DIAGNOSIS OF PIGEON-TOEIN(IN CHILDREN
   Eugene E. Bleck, M.D.
   Palo Alto, California
8. COMMON PROBLEMS IN OBSTETRICAL ANESTHESIA
   Winnie J. Crump, M.D., Houston, Texas, Moderat
   George B. Jackson, M.D., Houston, Texas
   Frank H Morriss, Jr., M.D., Houston, Texas
   Frank Moya, M.D., Miami Beach, Florida
9. SOME ASPECTS OF PULMONARY INFECTIONS
   Sydney M. Finegold, M.D., Los Angeles, Californ
   Robert G. Petersdorf, M.D., Seattle, Washington
10. CONTROVERSIES, MANAGEMENT OF COLON AN RECTAL CARCINOMA
    Donald M. Gallagher, M.D.
    San Francisco, California
11. PRINCIPLES OF RADIOIMMUNOASSAY
    Phillip L. Howard, M.D.
    Burlington, Vermont
12. BACTEREMIA IN FEBRILE CHILDREN
    Jerome O. Klein, M.D
    Boston, Massachusetts
13. MONITORING AND ADJUNCTIVE CARE OF THE CRITICALLY-INJURED OR ILL PATIENT
    G. Tom Shires, M.D.
    New York, New York

USE THESE FORMS TO REGISTER IN ADVANCE, BUY TICKETS AND MAKE HOTEL RESERVATION

HAVE YOUR TICKETS READY FOR YOU WHEN YOU GET TO HOUSTON

Avoid the lines, the last minute rush, and the possibility of missing out on the TMA functions list ed below. Fill out the advance ticket order form, mail it to TMA with your check, and your ticket will be waiting for you.

MAIL TO: TEXAS MEDICAL ASSOCIATION
1801 NORTH LAMAR BOULEVARD, AUSTIN, TEXAS 78701

NUMBER OF TICKETS	FUNCTIONS AND PRICE (inclusive of tax and gratuity)	AMOUNT
_____	AN EVENING AT THE CABARET (DINNER THEATER)—Friday (May 13) @ $20 per person	_____
_____	GENERAL MEETING LUNCHEON—Friday (May 13) @ $8.25 per person	_____
_____	GENERAL MEETING LUNCHEON—Saturday (May 14) @ $8.25 per person	_____
_____	CONTINENTAL BREAKFAST PRESENTATIONS—Friday (May 13) @ $1.50 per person	_____
	1.___ 2.___ 3.___ 4.___ 5.___ 6.___ (see list—select one)	
_____	CONTINENTAL BREAKFAST PRESENTATIONS—Saturday 14) @ $1.50 per person	
	7.___ 8.___ 9.___ 10.___ 11.___ 12.___ 13.___ (see list—select one)	_____
	CHECK ENCLOSED FOR TOTAL	$_____

BE SURE TO FILL OUT THE ADVANCE REGISTRATION FORM ON THE OTHER SIDE AND RETURN PRIOR TO APRIL 25.

ADVANCE REGISTRATION FORM

GENERAL MEETING LUNCHEONS

Friday, May 13, 12:15 p.m., Shamrock Hilton Hotel. Luncheon speaker will be Edward Teller, Ph.D., LL.D., physicist, Stanford, California.

Saturday, May 14, 12:15 p.m., Shamrock Hilton Hotel. Featured speaker will be The Honorable Paul G. Rogers, Congressman, House of Representatives. Washington, D. C.

AN EVENING AT THE CABARET

Join your frinds for TMA's own special Dinner Theater Friday, May 13. Have dinner in the famous Emerald Room of the Shamrock Hilton at 8 p.m. and see a lively musical in the hotel's new Cabaret Theater at 9:30 p.m.

CONTINENTAL BREAKFAST PRESENTATIONS

Friday, May 13, and Saturday, May 14, 8:15-9:30 a.m., Shamrock Hilton Hotel and the Holiday Inn Medical Center. Attendance is limited. Have coffee and rolls with a guest speaker, then participate in an informal discussion period.

HOUSING BUREAU USE ONLY

OFFICIAL HOUSING REQUEST

TEXAS MEDICAL ASSOCIATION

110th Annual Session • May 12-15, 1977

Houston, Texas

MAIL TO:

HOUSING BUREAU
1006 Main — Suite 1101
Houston, TX 77002

(See location of facilities on back)

PARTICIPATING HOTELS AND CODES

TEL CODE	HOTEL
	.....Shamrock Hilton Hotel
entific Sessions and Exhibits	
gles	$ 29-43
ubles	$ 41-55
ns	$ 41-55
tes	$ 90 up 2-rm
	$140 up 3-rm
	.....Houston Marriott Hotel
use of Delegates, Boards, Councils,	
mmittees	
gles	$ 29-39
ubles	$ 39-49
ins	$ 45-49
tes	$104 2-rm
	$148 3-rm
	.....The Warwick Hotel
xiliary Meetings	
gles	$ 30-45
ubles	$ 45-55
ins	$ 45-55
ites	$100 up 2-rm
MC	.....Holiday Inn Medical Center
ientific Sessions	
gles	$ 24
ubles	$ 28
ins	$ 28
MI	.....Tidelands Motor Inn
ngles	$ 24-28
ubles	$ 26-31
ins	$ 25-38
ites	$ 55 up 2-rm
MI	.....Tides II Motor Inn
ngles	$ 26-32
ubles	$ 29-35
ins	$ 36-42
ites	$ 55 up 2-rm
	$125 3-rm

FILLED

• PLEASE READ CAREFULLY •

- Please PRINT or TYPE all items to assure accuracy.
- Complete each part below in detail for correct and rapid computer processing.
- Only one room per form.
- ALL confirmations will be sent to individual indicated in Part I.

PART I

INSTRUCTIONS: Complete requested data using abbreviations as necessary.

(NAME OF PERSON REQUESTING ROOM/S)

(LAST) (FIRST NAME)

(NAME OF COMPANY OR FIRM)

(STREET ADDRESS OR P. O. BOX NUMBER)

(CITY) (STATE) (ZIP — U.S.A.)

(COUNTRY) (Area Code) (PHONE NUMBER)

PART II

INSTRUCTIONS: 1. Select three hotels from the list provided on the left side of this form, then enter the appropriate code letters in the boxes below.

FIRST CHOICE	SECOND CHOICE	THIRD CHOICE
HOTEL CODE	HOTEL CODE	HOTEL CODE

PART III

INSTRUCTIONS:
1. **Print** or **type** names of all persons occupying room.
2. Check type room desired (single, twin, etc.).
3. Indicate arrival and departure dates.

GUEST NAME/S (PRINT LAST NAME FIRST)	P+1 — Parlor & one bedroom P+2 — Parlor & two bedrooms	
1.	CHECK ONE	ARR. DATE _____ DEP. DATE _____
2.	☐ SINGLE ☐ P+1	ARRIVAL TIME _____ ☐ AM ☐ PM (Check One)
3.	☐ DOUBLE	**NOTE:** ROOM WILL NOT BE HELD AFTER 6 P.M. UNLESS PAYMENT IS GUARANTEED FOR FIRST NIGHT. HOTEL MAY REQUIRE DEPOSIT.
4.	☐ TWIN ☐ P+2	

FOR USE OF ASSN. ONLY

ROOM RESERVATIONS MUST BE RECEIVED BY APRIL 25. CONFIRMATION CANNOT BE GUARANTEED ON RESERVATIONS RECEIVED AFTER THAT DATE.

1. **SHAMROCK HILTON HOTEL**
   Scientific Sessions and exhibits
2. **HOUSTON MARRIOTT HOTEL**
   House of Delegates, Boards, Councils, Committees
3. **THE WARWICK HOTEL**
   Auxiliary Meetings
4. **HOLIDAY INN MEDICAL CENTER**
   Scientific Sessions
5. **TIDELANDS MOTOR INN**
6. **TIDES II MOTOR INN**

Keep your office in good health.

Give it regular checkups.

Just like a patient, your office deserves proper attention. Equipment and supplies should be given regular checkups to make sure it's readily available and in good working order. And when you come up short, the Gentec Hospital Supply phone number should be close at hand.

Gentec provides a complete line of office supplies and equipment, plus training for your staff in the operation of all medical equipment. A periodic safety inspection program we call "Safety Through Service" to insure the operational efficiency of your equipment and machines. And fast delivery because you require it.

We know you have your share of emergencies. But when you rely on Gentec — supplies and equipment won't be among them.

Gentec
Hospital Supply Company
Division of Foremost-McKesson, Inc.
TERRELL SUPPLY DIVISION

P.O. Box 310, Fort Worth/Dallas 76101
Phone: AC 817 336-8731
Metro: AC 214 429-2566

P.O. Box 4415, Austin 78723
Phone: AC 512 478-2559

P.O. Box 32107, San Antonio 78216
Phone: AC 512 344-0213

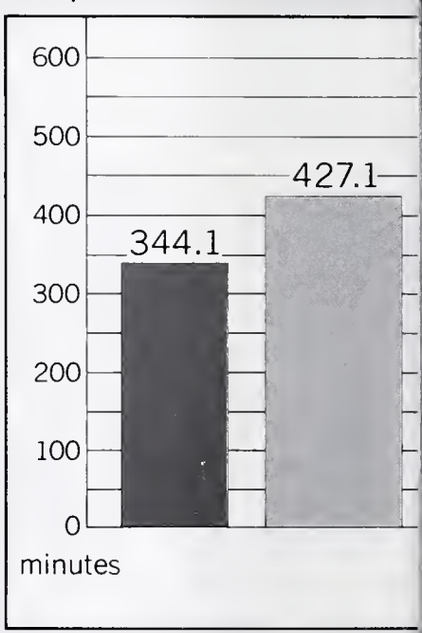
P.O. Box 1587, Amarillo 79106
Phone: AC 806 376-4696

P.O. Box 2913, Lubbock 79408
Phone: AC 806 763-4655

P.O. Box 1609, Houston 77001
Phone: AC 713 237-9678

Proof of effectiveness in 6 elderly Texans with insomnia

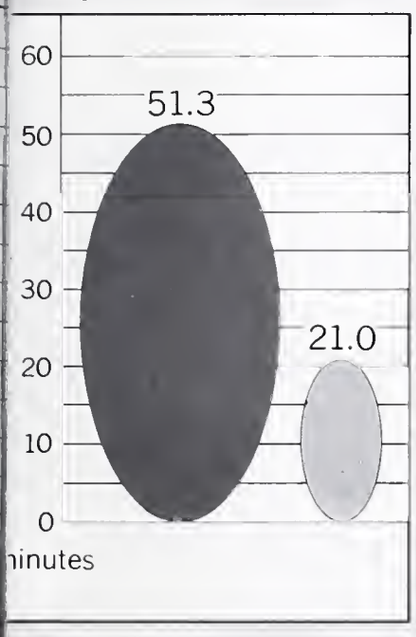
Average increase in total sleep time: 83.0 minutes



Elderly insomniac patients slept appreciably longe fell asleep faster, spent less time aw during the night[1]

Six elderly insomniac fema average age 74, received Dalma (flurazepam HCl) 15 mg for se consecutive nights in the sleep research laboratory of a major versity medical center in Texas. Every patient improved clinica in the two insomnia parameters shown above, and also spent le time awake after sleep onset. T greater the degree of insomnia any patient experienced before Dalmane, the greater the impr ment with Dalmane. Efficacy w undiminished over the entire medication period.

/erage decrease in sleep
tency: 30.3 minutes



)almane (flurazepam HCl)
; relatively safe, even
)r patients on chronic
'arfarin therapy

Morning "hang-over" has been
latively infrequent with Dalmane.
he usual adult dosage is 30 mg *h.s.*;
)wever, in elderly and debilitated
tients, start with 15 mg to help
eclude oversedation, dizziness or
axia. Dalmane may be used in
tients on chronic warfarin therapy;
) unacceptable fluctuation in
othrombin time has been reported.[2,3]

Pretreatment

DALMANE
(flurazepam HCl)
15 mg

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:
Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent noeturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.
Contraindications: Known hypersensitivity to flurazepam HCl.
Warnings: Caution patients about possible eombined effeets with afcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating maehinery, driving).

Usage in Pregnancy: **Several studies of minor tranquilizers (chlordiazepoxide, diazepam, and meprobamate) suggest increased risk of congenital malformations during the first trimester of pregnancy. Dalmane, a benzodiazepine, has not been studied adequately to determine whether it may be associated with such an increased risk. Because use of these drugs is rarely a matter of urgency, their use during this period should almost always be avoided. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Not recommended for use in persons under 15 years of age. Though physical and psyehological dependence have not been reported on recommended doses, use eaution in administering to addiction-prone individuals or those who might increase dosage.
Precautions: In elderly and debilitated, limit initial dosage to 15 mg to preelude oversedation, dizziness and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendeneies. Periodic blood counts and liver and kidney funetion tests are advised during repeated therapy. Observe usual precautions in presenee of impaired renal or hepatic function.
Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have oeeurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intoleranee or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, ehest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, diffieulty in foeusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, exeessive salivation, anorexia, euphoria, depression, slurred speeeh, confusion, restlessness, hallucinations, paradoxieal reaetions, *e.g.*, exeitement, stimulation and hyperactivity, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase.
Dosage: Individualize for maximum benefieial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.
Supplied: Capsules eontaining 15 mg or 30 mg flurazepam HCl.

References:
1. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
2. Data on file, Medieal Department, Hoffmann-La Roche Inc., Nutley NJ
3. Robinson DS, Amidon EL: Interaction of benzodiazepines with warfarin in man, in *The Benzodiazepines*, edited by Garattini S, Mussini E, Randall LO. New York, Raven Press, 1973, p. 641

Objective proof offered by no other sleep medication

Dalmane®
(flurazepam HCl)©IV

One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.
One 30-mg capsule *h.s.* — usual adult dosage (15 mg may suffice in some patients).

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Think you know all about asthma?

Then you should know all about TEDRAL.
It provides—

- □ rapid symptomatic relief, as well as prophylaxis
- □ β-ADRENERGIC ACTION THAT RELAXES BRONCHIAL SMOOTH MUSCLE
- □ α-ADRENERGIC ACTION THAT REDUCES BRONCHIAL EDEMA AND SECRETIONS
- □ synergistic action of ephedrine and theophylline for effective and prolonged bronchodilation
- □ dosage forms to meet individual patient needs

For asthma management...

Tedral® / Tedral® SA / Tedral® Elixir

Each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer); and 25 mg phenobarbital in the immediate release layer.

SUSTAINED ACTION

Each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine HCl, and 2 mg phenobarbital; the alcohol content is 15%.

WARNER/CHILCOTT
Division, Warner-Lambert Company
Morris Plains, New Jersey 07950

T-GP-74-B/W

TEDRAL®

TEDRAL® SA Sustained Action

TEDRAL® Elixir

CAUTION: Federal law prohibits dispensing Tedral SA without prescription.

Description. Tedral: eaeh tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Tedral SA: each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer); 25 mg phenobarbital in the immediate release layer.

Tedral Elixir: each 5 ml teaspoonful eontains 32.5 mg theophylline, 6 mg ephedrine hydrochloride, and 2 mg phenobarbital; the alcohol content is 15%.

Indications. Tedral, Tedral SA, and Tedral Elixir are indicated for the symptomatic relief of bronchial asthma, asthmatie bronehitis, and other bronchospastic disorders. They may also be used prophylactically to abort or minimize asthmatic attacks and are of value in managing occasional, seasonal or perennial asthma.

Tedral SA (Sustained Action) offers the convenience of b.i.d. dosage.

Tedral Elixir is convenient for persons who may have difficulty in swallowing tablets.

These Tedral formulations are adjunets in the total management of the asthmatic patient. Acute or severe asthmatic attacks may neeessitate supplemental therapy with other drugs by inhalation or other parenteral routes.

Contraindications. Sensitivity to any of the ingredients; porphyria.

Warnings. Drowsiness may occur. PHENOBARBITAL MAY BE HABIT-FORMING.

Preeautions. Use with caution in the presence of cardiovascular disease, severe hypertension, hyperthyroidism, prostatic hypertrophy, or glaucoma.

Adverse Reactions. Mild epigastrie distress, palpitation, tremulousness, insomnia, difficulty of micturition, and CNS stimulation have been reported.

Average Dosage. *Prophylactic or Therapeutic.*

Tedral: *Adults*—One or two tablets every 4 hours. *Children*—(Over 60 lb) one-half the adult dose.

Tedral SA: *Adults*—One tablet on arising and one tablet 12 hours later. Tablets should not be chewed. *Children*—Not established for children under 12.

Tedral Elixir: Note: One teaspoonful is equivalent to *one-quarter* Tedral tablet. *Children*—One teaspoonful per 30 lb body weight, every 4-6 hours, unless prescribed otherwise by physician. Should be given to ehildren under 2 years of age only with extreme caution. *Adults*—One to two tablespoonfuls every four hours.

Supplied. Tedral: White, uncoated seored tablets in bottles of 24 (N 0047-0230-24), 100 (N 0047-0230-51) and 1000 (N 0047-0230-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0230-11).

Tedral SA: Double-layered, uneoated, coral/mottled white tablets in bottles of 100 (N 0047-0231-51) and 1000 (N 0047-0231-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0231-11).

Tedral Elixir: Dark red and cherry-flavored in 474 ml (16 fl oz) bottles (N 0047-0242-16).

STORE BETWEEN 59° and 86°F (15° and 30°C).

Full information is available on request.

CME from ACP

Looking for opportunities to further your medical education? The prestigious **American College of Physicians** postgraduate courses and meetings are open to both ACP members and non-members. Here is a sampling of ACP continuing medical education offerings right in your own state:

* *Current Topics in Nephrology,* April 11-13, 1977, Brooke Army Medical Center and U.S. Army Institute of Surgical Research, Fort Sam Houston, Texas. Director: Richard H. Merrill, M.D.

* *Cardiovascular Echocardiography,* April 20-22, 1977, Baylor College of Medicine, Houston, Texas. Director: Robert J. Luchi, M.D., F.A.C.P.

* *Review of Internal Medicine – 1977,* June 2-4, 1977, Baylor College of Medicine, Houston, Texas. Director: Harold Brown, M.D., F.A.C.P.

A MAJOR CME EVENT

* *58th Annual Session of the American College of Physicians,* April 18-21, 1977, Dallas Convention Center. Four days of Lectures, Symposia, Panels, Workshops and Scientific Papers.

ACP Courses Fulfill AMA Category #1 Requirements

For Details Write

American College of Physicians
4200 Pine Street, Dept. T
Philadelphia, Pa. 19104

☐ Topics in Nephrology (Texas)
☐ Echocardiography (Texas)
☐ Internal Medicine Review (Texas)
☐ ACP Annual Session

Name _____

Address _____

City _____ State _____ Zip _____

Please Print

MEDICAL ARTS CLINIC ASSOCIATION of corsicana

DERMATOLOGY & SYPHILOLOGY
JOSEPH M. GLICKSMAN, M.D., F.A.A.D.*
J. D. SMITH, M.D., F.A.A.D.*

EAR, NOSE, & THROAT
PHILLIP M. AWTREY, M.D., F.A.A.O.O.*

GENERAL & VASCULAR SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D., F.A.C.S.*

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
ALLEN M. JONES, M.D.*
JOHN D. NELSON, M.D.*
L. BRYAN COTTON, JR., M.D.*
KENT ROGERS, M.D.

FAMILY PRACTICE DEPARTMENT
ENNIS, TEXAS
W. B. KINZIE, M.D.*

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
W. GENE MURFF, M.D., F.A.C.O.G.*
NEAL GREEN, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D., F.A.A.O.O.*

ORTHOPAEDIC SURGERY
WALLACE E. LOWRY, JR., M.D.*
JAMES A. DOTSON, M.D.*

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D., F.A.A.P.*

UROLOGY
WILLIAM V. HALL, M.D.*

EXECUTIVE DIRECTOR
DON L. BOWEN, M.G.M.A.

* DIPLOMATE OF THE AMERICAN BOARD

TRAVIS CLINIC FOUNDATION AND TRAVIS CLINIC ASSOCIATION

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D., Emeritus
Ken E. Kuykendall, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
Mary A. Bone, M.D.
J. A. Armstrong, M.D.
D. B. Turner, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Pediatrics:
M. L. Gray, M.D.
D. D. DeWitt, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

Podiatry:
Daniel H. Phelps, D.P.M.

Psychology:
Charles T. Fries, Ed.D.

Business Manager:
Gerald L. Burks

Ben H. Quinney, M.D.

Announces The CONVERSION Of His Office

For The Practice Of

Hematology And Medical Oncology

TO CONSULTATION ONLY

865 Margaret Place

Shreveport, Louisiana 71101

By Appointment Only

Telephone
Office (318) 222-1006

THE MALPRACTICE CRISIS

MANY MAJOR COMPANIES HAVE QUIT OR WILL SOON QUIT WRITING PROFESSIONAL LIABILITY INSURANCE. IF YOU CANNOT SECURE, OR CANNOT RENEW YOUR COVERAGE, CONTACT JOE NIGRELLE, 512 - 341-2564.

Suite 518 - GPM Building - North Tower
800 N.W. Loop 410
SAN ANTONIO, TEXAS 78212
AC 512 - 341-2564

JOE NIGRELLE INSURANCE AGENCY

1007 West 31st Street, Austin, Texas 78705
AC 512 452-0189 Kirke Jeffrey

Professional Liability • Office Liability • Physician Equipment Floaters • Fire and Homeowners • Automobile • Farm Insurance • Life, Accident and Sickness, Disability Income • Malpractice Insurance.

Texas Physicians' Directory

Clinics

THE FORT WORTH CLINIC
1221 West Lancaster Avenue, Fort Worth, Texas 76102
Telephone 817 336-7191

INTERNAL MEDICINE
Kendra J. Belfi, M.D.
John M. Church, M.D.
Thomas J. Coleman, M.D.
Robert R. Dickey, M.D.
Ferd E. Garrison, Jr., M.D.
Cortell K. Holsapple, M.D.
John E. Johnson, Jr., M.D.
O. M. (Jack) Phillips, M.D.

GENERAL SURGERY
John H. Sewell, M.D.
Robert L. Sewell, M.D.

ORTHOPEDIC SURGERY
Thomas E. Rapp, M.D.

CONSULTANTS IN RADIOLOGY
Victor E. McCall, M.D.
Dixon Presnall, M.D.
Harry H. Whipp, M.D.

FIFTH AVENUE CLINIC
650 Fifth Avenue, Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etler, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

THOMAS-SPANN CLINIC
1533 South Brownlee, Corpus Christi, Texas 78404
Telephone 883-7411

FAMILY MEDICINE
Travis B. Phelps, M.D., F.A.A.F.P.
T. D. Harvey, M.D., A.B.F.P.
H. R. Rose, M.D., A.B.F.P.
C. L. Vernor, M.D.
Frederick S. Maurer, M.D.

ORTHOPEDICS
C. M. Yanez, M.D., F.A.C.S.

INTERNAL MEDICINE
G. A. Reeves, M.D.
Pruett Moore, Jr., M.D.
Mark G. Strauss, M.D.

ADMINISTRATOR
Gene Hybner

DIRECTOR OF NURSES
Pat Parker, R.N.

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

Internal Medicine
C. M. Maruri, M.D.
A. J. Nodarse, M.D.

General Surgery
B. W. Hink, M.D., F.A.C.S.

Family Medicine
J. H. Cochrane, Jr., M.D., F.A.A.F.P.
J. W. O'Bryant, M.D.
A. A. Piske, M.D.

Family Medicine and General Surgery
Salvador Faus, M.D.

Clinic Manager
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

Remind your colleagues of your specialty and office location. Purchase a listing in the "Texas Physicians' Directory."

MALONE AND HOGAN CLINIC
1501 West 11th Place, Big Spring, Texas 79720, Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.
W. B. Allensworth, M.D.

GENERAL SURGERY
C. B. Marcum, M.D., F.A.C.S.
J. E. Mathews, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
C. T. Moore, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
D. M. Logan, M.D.
V. T. Smith, M.D.

FAMILY PRACTICE
W. R. Strahan, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.
J. W. Kuykendall, M.D.

PEDIATRICS
J. M. Woodall, M.D.
B. R. Owen, M.D., F.A.A.P.

RADIOLOGY & NUCLEAR MEDICINE
Buerk Williams, M.D.

UROLOGY
G. F. Dillon, M.D., D.A.B.U.
J. W. Cowan, M.D.

DERMATOLOGY
H. K. Butler, M.D.

PODIATRY
Bradford Glass, D.P.M.

CONSULTANT IN ELECTROENCEPHALOGRAPHY
M. L. Proler, M.D.

ADMINISTRATION
R. L. Heith, Administrator
Charles N. Butts, Fiscal Officer
H. L. Mott, Office Manager
Danny Nichols, Comptroller

RUGELEY AND BLASINGAME CLINIC
2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Richard R. Raphael

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.

DERMATOLOGY
T. S. Arrington, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

ANESTHESIOLOGY
C. G. Spears, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kleier, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

CLINIC OF THE SOUTHWEST ASSOCIATES
6437 High Star at Hillcroft, Houston, Texas 77036
Telephone 774-7671

INTERNAL MEDICINE
William C. Franklin, M.D.
Arthur B. Conde, M.D., F.A.C.A.

OBSTETRICS & GYNECOLOGY
Joy L. Deere, M.D.
Loren B. Goss, M.D.

PEDIATRICS
John R. Dunn, Jr., M.D.
Blanca S. Azlos, M.D.

PHYSICAL THERAPY
Richard D. Tinsley, R.P.T.

GENERAL SURGERY
Harvey B. Koch, M.D.

UROLOGY
Glen E. Lewis, M.D.

DENTISTRY
Burley G. Ingram, D.D.S.

RADIOLOGY
Richard E. Schuette, M.D.
Fred C. Hodges, M.D.

BUSINESS MANAGER
G. G. Fonville, M.H.A.

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77030
Telephone 713 797-9191

Internal Medicine and Diagnosis

ALLERGY
Arthur T. Pedersen, M.D.

CARDIOVASCULAR DISEASE
Thomas J. Fatherree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.
Bogusiaw Godlewski. M.D.
Matthew T. Monroe, M.D.

DERMATOLOGY
Samuel F. Bean, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Raymond L. Gregory, M.D.
R. Frederick Gregory, M.D.
Thomas J. Hanson, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.
Michael Gagliardi, M.D.
James K. Gordon, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George T. Conklin, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
George Burnazian, M.D.
Benjamin L. Portnoy, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.
James V. Ryan, M.D.

NEPHROLOGY
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

NEUROLOGY
Donald J. Russell, M.D.
George Isaacs, M.D.
Ernesto Infante, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.
Harry R. Price, M.D.
Edward L. Middleman, M.D.
Martin J. Hrgovic, M.D.

PATHOLOGY
Paul B. Radelat, M.D.
Ashok M. Balsaver, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.
Martin L. Kaplan, M.D.
Louis C. Waddell, Jr., M.D.

RADIOLOGY
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.
Joe B. Wilson, M.D.
Howard J. Pollock, M.D.

NUCLEAR MEDICINE
Donald A. Podoloff, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
Robert B. Hall,
Administrator
Richard V. Vanderslice,
Assistant Administrator

HOUSTON HEADACHE CLINIC
Park Plaza Professional Building
1213 Hermann Drive, Suite 855
Houston, Texas 77004
(713) 528-1916

Neurology
Ninan T. Mathew, M.D., F.R.C.P.(C)

Allergy

PETER B. KAMIN, M.D., P.A.
Certified American Boards of Pediatrics and Allergy
Diplomate American Board of Allergy and Immunology
Allergy and Immunology

Suite 601, Oak Hills Medical Building
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Phone 512 696-4405 or 227-6331

HOUSTON ALLERGY CLINIC
Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Richard H. Jackson, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Warren J. Raymer, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
D. W. Waddell, M.D., F.A.A.C.I.A.
Ramon Garrido, M.D., F.A.C.A., F.A.A.C.I.A.*
(Certified American Board of Pediatrics)
*Diplomate American Board of Allergy & Immunology

Suite 444, Hermann Professional Building
6410 Fannin St., Houston, Texas 77030, 713 - 797-0900

TMA Group Insurance Plans
. . . Another service of your association

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

JOHN P. McGOVERN, M.D.
Director-Consultant

THEODORE J. HAYWOOD, M.D.
ORVILLE C. THOMAS, M.D.
JOSEPH T. QUENG, M.D.
LAWRENCE G. THORNE, M.D.
K. VENUGOPALAN, M.D.
ROBERT E. SMITH, M.D.
JAMES A. AYERS, M.D.
EUNICE W. CHOU, M.D.
ALBERT LEHMANN, M.D.
GERALD T. MACHINSKI, M.D.

Research Associates
MICHAEL H. SMOLENSKY, Ph.D.
ALAIN REINBERG, M.D., Ph.D.
CALVIN J. McLERRAN. Ph.D.
MICHAEL A. McCORMICK, Ph.D.
GLENNA M. KYLE, M.S.
ITING MAY LU, M.S.

Consultants

EVAN M. HERSH, M.D.
JUDITH H. MARSTON, Ph.D.
Immunology

JAMES A. KNIGHT, M.D.
Psychiatry

HERBERT C. McKEE. Ph.D.
RICHARD K. SEVERS, Ph.D.
Air Pollution

CAROLYN S. LEACH, Ph.D.
Clinical Laboratories

JOHN A. THOMAS, Ph.D.
Clinical Pharmacology

THOMAS D. DOWNS, Ph.D.
Biometrics

WARREN E. SCHALLER, H.S.D.
Allied Health Sciences

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025, (713) 661-1444

CORPUS CHRISTI ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology

2530 Morgan, Corpus Christi, Texas, 882-3487

STUART ALAN MASON, M.D., P.A.
Fellow American Association for Clinical Immunology and Allergy
Fellow of the American College of Allergists
Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

ALLERGY AND IMMUNOLOGY
Joseph T. Sams, M.D., P.A. or C. David Meadows, M.D., P.A.
Diplomates of the American Board of Allergy and Immunology

900 W. Randol Mill Rd., Suite 215, Arlington, Texas 76012, 817 277-1161

CHARLES A. RUSH, JR., M.D.
Diplomate/American Board of Allergy & Immunology

Northeast Medical Clinic Association
7601 Glenview Drive
Fort Worth, Texas 76118

V. E. FRIEDEWALD, M.D., F.A.C.P.
Diplomate American Board of Allergy and Immunology
Allergy

2203 West Tennessee, Midland, Texas 79701, 682-5385

FREDERICK W. GROVER, M.D. & ASSOCIATES
Diplomate of the American Board of Allergy and Immunology
Allergy and Immunology
Children and Adults
6114 Sherry Lane, Preston Center, Dallas, Texas 75225
Telephone: (214) 363-7790

TMA Members' Retirement Trust (Keogh)
. . . Another service of your association

Anesthesiology

HOUSTON PAIN CLINIC
ALEX M. STRAJA, M.D., F.R.C.P.(C), F.A.C.A.
Practice Limited to Treatment of Chronic Pain Syndromes and Nerve Blocks
Practice by Referral Only
Medical Towers, 6608 Fannin, Suite 1417
Houston, Texas 77030 Phone: 713 797-1681

Colon & Rectal Surgery

ALVIN BALDWIN, JR., M.D.
Diplomate American Board of Colon and Rectal Surgery

R. D. DIGNAN, M.D.
Diplomate American Board of Surgery
Diplomate American Board of Colon and Rectal Surgery

Suite 1209 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246
Telephone 824-2573

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery

2715 Fannin Street, Houston, Texas

C.D.L. CROMAR, M.D., M.S., F.R.C.S.E., F.R.C.S.C.
Surgery of the Rectum and Colon

Suite 8, 3337 Plainview, Pasadena, Texas 77504

SOMMAI SEHAPAYAK, M.D.
Diplomate American Board of Colon and Rectal Surgery
Diseases and Surgery of the Colon and Rectum and Fiber-optic Colonoscopy

Medical Tower, Suite 210, 1550 West Rosedale,
Fort Worth, Texas 76104, 817-338-4501 (24 hours)

SUVID PITA, M.D.
Colon and Rectal Surgery
Colonoscopy

Barnett Tower, Baylor Medical Plaza
3600 Gaston Ave, Suite 411
Dallas, Texas 75246
Telephone 214 821-4300

MANUEL G. LAGON, M.D., F.A.C.S.
Diplomate American Board of Colon and Rectal Surgery

FORT WORTH COLON AND RECTAL CLINIC, P.A.
Colonoscopy, Colon and Rectal Surgery

909 Eighth Avenue, Fort Worth, Texas 76104; Telephone 332-1371

MEMORIAL LIBRARY

TEXAS MEDICAL ASSOCIATION

1801 North Lamar Blvd., Austin, Texas 78701, 512 477-6704

A clinical library designed to assist the practicing physician

. . . Another service of your association

Dermatology

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy

1400 Eighth Street, Wichita Falls, Texas

DRS. PIPKIN AND RESSMANN
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies

714 Medical Arts Bldg., San Antonio, Texas 78205

J. GILMORE BRAU, M.D.
Dermatology and Syphilology
X-Ray and Radium Therapy
Hours 9 to 1—3 to 5
3817 Brown Street, Dallas, Texas

JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
A Professional Association
Dermatology, Syphilology, and Cancer of the Skin

3801 19th St., Suite 500, Lubbock, Texas 79410

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies

7777 Forest Lane, Suite 214, Dallas, Texas 75230; Phone 661-7460

GERALD A. CASID, M.D., P.A.
Skin Diseases—Skin Tumors
Hair Transplantation, Dermabrasion, Chemical Peels

333 N. Shiloh Rd., Garland, Texas 75042
Phone 214-272-5451

DAVID S. ALKEK, M.D. AND ASSOCIATES
Dermatology and Cancer of the Skin
Dermabrasion and Chemical Peel

8226 Douglas Avenue, Suite 755
Dallas, Texas 75225
Ph: 214-691-6691

Endocrinology

ENDOCRINE ASSOCIATES OF DALLAS, P.A.
STANLEY FELD, M.D.
RICHARD SACHSON, M.D.
Practice Limited to Endocrinology

Douglas Plaza Bldg., Telephone: 363-5535
8226 Douglas Avenue, Dallas, Texas 75225

TMA Physicians' Placement Service

. . . Another service of your association

Eye, Ear, Nose, Throat

DRS. NALLE, ELLSASSER AND CLAYTON
Eye and Allergy of the Ear, Nose and Throat

Ernest Nalle, Jr., M.D., DAB Oto., F.A.C.S., F.I.C.S.
M. G. Ellsasser, M.D., DAB Oph.
Miles G. Clayton, M.D., Oph.

1312 Main Street, Lubbock, Texas 79401, 806 762-8771

Family & General Practice

GLENN C. COATES, M.D.*
GENE V. HAVERLAH, M.D.
SAM A. NIXON, M.D.*
EUGENE M. TOKAR, D.D.S.

1303 Hospital Blvd., Floresville, Texas 78114, 512 393-2527
*Diplomate American Board of Family Practice

SAMUEL SILVA, M.D.
Hair Transplantation

4759 South Freeway, Fort Worth, Texas 817 923-7374

Gastroenterology

CECIL O. PATTERSON, M.D., F.A.C.P.
DAVID E. LANGDON, M.D., F.A.C.P.
Gastroenterology, Gastroscopy, Esophagoscopy, and Colonoscopy
1414 Medical Arts Building, Dallas, Texas, 742-6141-44

MILFORD O. ROUSE, M.D., F.A.C.P.
Consultations in hospitals only

DRS. BAILEY, DOUGLAS AND DEVANEY ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System

Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
George T. DeVaney, M.D.

KALMAN NARAYAN, M.D.
Diplomate American Board of Internal Medicine
Gastroenterology, Gastroscopy, Colonoscopy, Polypectomy, E.R.C.P.

909 8th Ave., Suite 7, Ft. Worth, Texas 76104, 817 336-9055

General Surgery

BURT B. SMITH, M.D., F.A.C.S.
Surgery
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery

728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

TMA Physicians Benevolent Fund

. . . Another service of your association

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery

1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Thoracic Surgery
Vascular, General and Thoracic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue,
Dallas, Texas 75246, 821-2356

ROBERT J. TURNER, III, M.D., F.A.C.S.
Diplomate American Board of Surgery
General and Peripheral Vascular Surgery

The Saint Joseph Professional Building
1400 South Main Street, Suite 104
Fort Worth, Texas 76104, 335-8311

ROBERT M. STECKLER, M.D.
Diplomate American Board of Surgery
Head and Neck Surgery, Surgery, and Surgical Oncology

Baylor Medical Plaza, Suite 1008, 3600 Gaston Avenue,
Dallas, Texas 75246, 214 827-9880

ROBERT DAVIS, M.D., M.B., B.Ch. (Rand), F.R.C.S. (Edin.)
General Surgery

430 Park Plaza Professional Building, 1213 Hermann Drive,
Houston, Texas 77004; 713 528-0597

By Appointment

Hand Surgery

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopaedic Surgery
PETER R. CARTER, M.D.
Hand Surgery and Upper Extremity Reconstructive Surgery

Baylor Medical Plaza, Barnett Tower, Suite 802, 3600 Gaston Avenue
Dallas, Texas 75246, 214 823-5351

Neurological Surgery

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery

Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Morris Sanders, M.D.
Phillip E. Williams, Jr., M.D.
Ira C. Denton, Jr., M.D.
W. Robert Hudgins, M.D.
Jack Woolf, M.D., Consultant

5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620,
Dallas, Texas 75235; 214 637-0420

8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905,
Dallas, Texas 75231; 214 369-7596

3600 Gaston Avenue, Barnett Tower, Baylor Medical Plaza, Suite 310,
Dallas, Texas 75246; 214 826-1976

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
Neurological Surgery

8210 Walnut Hill Lane, Suite 805, Dallas, Texas 75231, 363-8524

RONALD SMITH, M.D.
Neurological Surgery

901 South Lake, Fort Worth, Texas, 336-0551

CHERRY-LONG NEUROSURGERY ASSOCIATION
GLENN R. CHERRY, M.D., D.A.B.N.S., F.A.C.S.
R. GORDON LONG, M.D., D.A.B.N.S., F.A.C.S.
BENNIE B. SCOTT, M.D.
Neurological Surgery
Baylor Medical Plaza — 605 Barnett Tower
3600 Gaston Avenue — Dallas, Texas 75246
Telephone 214 826-7060

EL PASO NEUROLOGICAL INSTITUTE
Professional Association

Neurology, Neurosurgery, Electroencephalography
Neuro-Radiology, Physiotherapy

William J. Nelson, M.D., Neurosurgery
John T. O'Neal, M.D., Neurosurgery
Robert D. Schneider, M.D., Neurology and Electroencephalography
Steven K. Crouse, M.D., Neurology and Electroencephalography

Medical Plaza Bldg., Suite 307
El Paso Medical Center
1501 Arizona Avenue, El Paso, Texas 79902
Telephone 915 532-8901

TEXAS NEUROLOGICAL INSTITUTE AT DALLAS, P.A.

Neurological Surgery
James E. Bland, M.D.
Martin L. Lazar, M.D.

Medical Neurology, Electroencephalography and Electromyography
Ralph G. Greenlee, Jr., M.D.
Allan L. Naarden, M.D.
Richard R. North, M.D.
William S. Woodfin, M.D.

Neuro-Ophthalmology and Electrodiagnosis of the Eye
Peter R. Bringewald, M.D.

7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676
8210 Walnut Hill Lane, Suite 900, Dallas, Texas 75231; 214 361-8100

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D., F.A.C.S.
E. FLOYD ROBINSON, M.D.

Neurological Surgery

2210 Maroneal, Houston, Texas 77025, 523-3684

FORT WORTH NEUROSURGICAL CLINIC
William R. Bernell, M.D.
George B. Crisp, Jr., M.D.
Charles L. Webster, Jr., M.D.

662 South Henderson, Fort Worth, Texas 76104
Telephone 338-9333; WATS Line 1-800-792-2278

"Every man owes some of his time to the upbuilding of his profession"

—Theodore Roosevelt

Take an active role in TMA and your county society.

Nuclear Medicine

NUCLEAR MEDICINE LABORATORIES OF TEXAS
Texas Medical Center
6411 South Main Street, Houston, Texas 77025

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology and Obstetrics-Gynecology

Herbert C. Allen, Jr., M.D., Director, 526-1501

HERBERT C. ALLEN, JR., M.D.
Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77025, 526-1501

Ophthalmology

HOUSTON EYE ASSOCIATES
1100 Hermann Prof. Bldg., Houston, Texas 77030, 713 790-1100

Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D., F.A.C.S.
Malcolm L. Mazow, M.D., F.A.C.S.
Robert H. Stewart, M.D., F.A.C.S.
Robert B. Wilkins, M.D., F.A.C.S.
Jeffrey D. Lanier, M.D., F.A.C.S
Michael A. Bloome, M.D., F.A.C.S.
Paul C. Salmonsen, M.D.
Richard L. Kimbrough, M.D.

DRS. ALPAR, TAYLOR, HOWELL, CURRIE & WEINBERGER
Ophthalmology

John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Hugh B. Currie, M.D.
Bruce L. Weinberger, M.D.
Diplomates of the American Board of Ophthalmology
15 Medical Drive, Amarillo, Texas

TEXAS RETINA ASSOCIATES

Albert Vaiser, M.D.
William B. Snyder, M.D.
William L. Hutton, M.D.

Diseases and Surgery of the Retina and Vitreous

318 Medical Arts Building, Dallas, Texas, 748-0958

BRUCE C. TAYLOR, M.D.
RICHARD L. WINSLOW, M.D.
Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E., Dallas, Texas 75204
214 521-1153

McPHERSON ASSOCIATES
Diseases and Surgery of the Retina and Vitreous
Alice R. McPherson, M.D.
Robert A. Moura, M.D.
Arthur W. Willis, M.D.
Durham Barnes, M.D.

6436 Fannin, Suite 800, Houston, Texas 77030
713 797-1903

EYE ASSOCIATES
Diseases and Surgery of the Eye
Charles A. Sargent, M.D.
Alan C. Baum, M.D.

3838 Hillcroft, #415, Houston, Texas 77027, 713 781-2882

CORPUS CHRISTI EYE ASSOCIATES

J. Gordon Bryson, M.D.
C. A. Struve, M.D.
John W. Lewis, M.D.

3166 Reid Drive, Corpus Christi, Texas 78404, Phone 853-7319

EYE CENTER OF AUSTIN

3913 Medical Parkway
Austin, Texas 78756; 512 451-8484

Edward J. Petrus, M.D.
Richard E. Nieman, M.D.

JOHN Y. HARPER, JR., M.D., P.A.

Diseases & Surgery of the Vitreous and Retina

601 Madison Square Medical Building
311 Camden Street, San Antonio, Texas 78212
(512) 226-1812

PETER R. BRINGEWALD, M.D.

Neuro-Ophthalmology

Texas Neurological Institute at Dallas, P.A.
7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214-661-7676

By appointment only.

Orthopedic Surgery

H. H. Beckering, M.D.
L. Ray Lawson, M.D.
George Truett James, M.D.
Robert D. Vandermeer, M.D.
Wynne M. Snoots, M.D.
R. Stephen Curtis, M.D.

W. B. CARRELL MEMORIAL CLINIC

A Professional Association
2828 Lemmon Ave., Dallas, Texas

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas

Louis J. Levy, M.D.
Henry C. McDonald, Jr., M.D.
Fred W. Sanders, M.D.
James M. Beckley, M.D.
Joseph H. Gaines, M.D.

Ralph E. Donnell, M.D.
F. Carlton Hodges, M.D.
J. Price Brock, Jr., M.D.

ORTHOPEDIC ASSOCIATES

Diplomates American Board of Orthopedic Surgery

1133 N. 19th St., Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC

Joseph Barnhart, M.D.
Donald T. Lazarz, M.D.
Lee C. Detenbeck, M.D.
Thomas S. Padgett, M.D.

5620 Greenbriar, Houston, Texas 77005, 526-6262 and
Parkway Towers Professional Building, 150 West Parker Road,
Houston, Texas 77022, 691-3905

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr., M.D.
Kenneth C. Scholz, D.D.S., M.D.
W. Ted Sisco, M.D., P.A.
G. S. Gill, M.D.

3702 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

ADDRESS CHANGE? Avoid missing or delayed mail. Send old and new address to Membership Department, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701.

THE ORTHOPEDIC GROUP OF RICHARDSON

Charles E. Graham, M.D.
M. Gayle Gildewell, M.D.

812 S. Central Expressway, Richardson, Texas 75080, 231-6396

Orthopedic Surgery

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr., M.D.
E. E. Rising, Jr., M.D.*
C. Poindexter, M.D.
C. R. Vavrin, M.D.
Diplomates American Board of Orthopaedic Surgery
*Emphasizing Surgery of the Hand
Frank R. Vincenti, M.D.

801 West Randol Mill Road, Arlington, Texas 76012, 817 261-8284

BOSWELL-EVANS ORTHOPAEDIC CLINIC

4849 West Lawther Drive
Dallas, Texas 75214

George M. Boswell, Jr., M.D., F.A.C.S.
Practice Limited to Consultation and Surgery

James P. Evans, M.D.
Practice Limited to Sports Medicine

LOUIS W. BRECK, M.D., P.A., F.A.C.S.

Diplomate American Board of Orthopaedic Surgery
Practice Limited to Orthopaedic Surgery

1300 N. Stanton Street, El Paso 79902
Telephone 915 544-3831

THURSTON DEAN, M.D.

Diplomate American Board of Orthopedic Surgery

509 N. Garfield Street
Midland, Texas 79701
Telephone: 915 682-0433 or 682-0163

Otolaryngology

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.

Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

Otology

DANIEL McNAMARA MARTINEZ, M.D., F.A.C.S.

Otology and Otoneurology

8210 Walnut Hill Lane, Presbyterian Professional Building,
Suite 400, Dallas, Texas 75231; 214 691-7331

DALLAS HEARING, BALANCE AND OCULAR PULSE LABORATORY

Audiology—Vestibulometry—Non-invasive Carotid and Vertebral Circulation Studies

402 Presbyterian Professional Building, 8210 Walnut Hill Lane,
Dallas, Texas 75231; 214 691-7367

Make your plans now to attend the

110TH TMA ANNUAL SESSION

MAY 11-15, 1977 Houston

Pathology

FORT WORTH MEDICAL LABORATORIES
John J. Andujar, M.D.
Dorothy Patras, M.D.

1400 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

BROWN & ASSOCIATES MEDICAL LABORATORIES
Clinical Pathology, Hematology, Surgical Pathology, Exfoliative Cytology and Electrophoresis

Wilson G. Brown, M.D.
George V. Miller, M.D.
Walter G. Olin, Jr., M.D.
John R. Thomas, M.D.
S. Joseph Skinner, M.D.
Joe B. Haden, M.D.
Enrique van Santen, M.D.
Elaine V. Shalek, M.D.
Robert H. McNeely, M.D.
Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas 77030
220 Park Plaza Prof. Bldg., Houston, Texas 77004
Telephone 527-5230
Mailing Containers on Request — Office Pickup Service In Houston

PRUITT MEDICAL LABORATORIES
Jack Pruitt, M.D.
E. Hernandez, M.D.
Diplomates, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation
P. O. Box 160, Lufkin, Texas 75901, 634-4451

WACO CLINICAL PATHOLOGY LABORATORY
K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Robert Wayne Walter, M.D., F.A.C.P.
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation
Mailing Containers on Request
2112 Washington Ave., P.O. Box 3160, Waco, Texas 76707, 756-7226

J. S. Wilkenfeld, M.D., Medical Laboratories, Inc.
J. S. WILKENFELD, M.D. ENA E. MOCEGA, M.D.
Diplomates of the American Board of Pathology
Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology
8850 Long Point Road, P.O. Box 55008
Houston, Texas 77055, 713 468-0738
Mailing Containers on Request—Office Pickup Service In Houston

ARTHUR L. RAINES, M.D. AND ASSOCIATES
Pathologists
DIPLOMATES, AMERICAN BOARD OF PATHOLOGY
Clinical Pathology — Surgical Pathology
Exfoliative Cytology — Medicolegal Consultation
Hospital and Clinic Laboratory Consultation
P. O. Box 118, Cleburne, Texas 76031
817 645-9181, Ext. 360
MAILING CONTAINERS ON REQUEST

HENRY B. OWENS, M.D., F.C.A.P.
Diplomate American Board of Pathology
Cytology and Tissue Pathology Only

801 E. Border St., Suite M, P. O. Box 1627
Arlington, Texas 76010, (817) 461-2771

Mailing Containers on Request—Office Pickup Service In Arlington

Physical Medicine & Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES WARM SPRINGS FOUNDATION, INC.
P. O. BOX 58, GONZALES, TEXAS 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade
DAVID E. GUMPER, Administrator
LARRY E. BROWNE, M.D., Medical Director

ROBERTO G. ROLFINI, M.D.
Diplomate American Board of Physical Medicine & Rehabilitation
Rehabilitation Medicine and Electromyography

702 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205, Telephone 226-2424

WILLIAM T. BLESSUM, M.D.
Physical Medicine, Rehabilitation, & Electromyography

7342 Oak Manor, Suite 125

San Antonio, Texas 78229; Telephone (512) 349-6573

SHOAL CREEK REHABILITATION CENTER
3501 Mills Avenue, Austin, Texas 78703, 512 452-0361

Rodney J. Simonsen, M.D., Medical Director
Joe T. Powell, M.D., Associate Director

Comprehensive rehabilitation facilities for spinal cord injury, stroke, head injury, pain management, and related conditions

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D., F.A.C.S.
THOMAS M. BIGGS, M.D., F.A.C.S.
LAURENCE E. WOLF, M.D.
Diplomates American Board of Plastic Surgery

PLASTIC SURGERY
5419 Caroline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery

530 Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Cosmetic Surgery

612 Doctors Bldg., Fort Worth, Texas 336-0356

PLASTIC SURGERY ASSOCIATES
Simon Fredricks, M.D., F.A.C.S.
Charles W. Bailey, Jr., M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery

Jonathan J. Dora, M.D.

1103 Medical Towers, Houston, Texas 77025, 523-5575

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
Plastic & Reconstructive Surgery
Cosmetic Surgery

606 Medical Plaza Bldg., 800 Eighth Avenue, Fort Worth, Texas 76104, 335-4751

VALENTIN GRACIA, M.D., P.A., F.A.C.S., F.I.C.S., D.A.B.
Aesthetic Surgery—Burns

1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

TMA International Travel Program
. . . Another service of your association

FRANCIS A. MORRIS, JR., M.D.
Diplomate American Board of Plastic Surgery
Plastic Surgery

3100 Red River, Austin, Texas 78705; 512-476-9149

PATRICK H. BECKHAM, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1111 West 34th Street, Suite 207, Austin, Texas 78705, 459-3258

WILLIAM E. BARNES, M.D.
Diplomate American Board of Plastic Surgery
Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 608, Austin, Texas, 454-7659

JOHN E. CARTER, M.D., P.A.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery

7711 Louis Pasteur Drive, San Antonio, Texas 78229
Telephone: (Area Code 512) Office 696-2390 Medical Exchange 227-6331

JOSEPH C. FORD, M.D., P.A., F.A.C.S.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery

508 Madison Square Medical Building
311 Camden, San Antonio, Texas 78215, 224-5509

BROMLEY S. FREEMAN, M.D., F.A.C.S.
D. ROBERT WIEMER, M.D.
Diplomates American Board of Plastic Surgery
Plastic & Reconstructive Surgery

7000 Fannin, Suite 1770, Houston, Texas 77025
713 795-5584

JACK L. CONLEE, M.D.
Diplomate American Board of Plastic Surgery
Plastic and Cosmetic Surgery

3318 S. Alameda, Suite 1, Corpus Christi, Texas, 855-7359

PLASTIC SURGERY ASSOCIATION
LEONARD KOCH, M.D.
Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410, 806 792-2313

ROBERT L. CLEMENT, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive Surgery

1111 West 34th Street, Suite 205, Austin, Texas 78705, 512 459-3101

STEPHEN C. LESAUVAGE, M.D.
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1318 Clinic Drive, Tyler, Texas 75701; 214 593-8296

Psychiatry

Perry C. Talkington, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Larry R. Kimsey, M.D.
Charles M. Smith, M.D.
Gregory G. Dimijian, M.D.
Linda R. Hughes, M.D.
Roy H. Fanoni, M.D.
Byron Howard, M.D.
Larrie W. Arnold, M.D.
Madeline W. Harford, M.D.
John G. Looney, M.D.

practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

FABRE CLINIC

LOUIS F. FABRE, JR., M.D., Ph.D.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy
Children — Family — Alcoholism

Free of charge to patient MEDICATION CLINIC FOR PATIENTS WITH ANXIETY OR DEPRESSION IN CONJUNCTION WITH CNS RESEARCH WITH PSYCHOPHARMACOLOGICAL COMPOUNDS

DAVID McLENDON, Ph.D.
Licensed Clinical Psychologist
Individual and Group Psychotherapy
Diagnostic Evaluations and Counseling

H. JOHN JACKSON, Ed.D.
Educational Psychologist
Administrative Consultation to School Districts
Program Organization Consultation
Individual Family Counseling

5503 Crawford Street, Houston, Texas 77004 713 526-2328

ALAN B. BRINSMADE, M.D.
General Psychiatry
Specializing in Psychotic Illnesses-Acute and Chronic

Hermann Medical Center Professional Building
Houston, Texas 77025, 713 524-8496

PERRY C. TALKINGTON, M.D.
Psychiatry

4645 Samuell Blvd., Dallas, Texas 75228, 214 381-3849

CHARLES B. COVERT, M.D., P.A.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy

San Felipe Green Professional Building, Suite 314
1900 Yorktown, Houston, Texas 77056; 713-627-9988

TMA Automobile Lease Program
. . . Another service of your association

Psychiatry & Neurology

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., J. J. Leyva, M.D.

Department of Psychology
Allen Goss, Ph.D., Jim M. Phillips, Ph.D.

Practice Limited to Neurology and Psychiatry
Office Hours By Appointment

First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

STEPHEN WEISZ, M.D.
Practice Limited to Neurology and Psychiatry

1637 Medical Arts Bldg., Dallas, Texas 747-5183

HAUSER CLINIC
Psychiatry, Neurology, Electroencephalography and Electromyography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
*H. James Stuart, M.D.
Javier A. Zapata, M.D.
*Susan B. Darsey, M.D.
*Harvey A. Rosenstock, M.D.

Section of Psychology
Ken R. Vincent, Ed.D.

Administrator
Richard J. Kurzenberger

Section of Neurology
*Gerald Ratinov, M.D.
*Robert M. Gordon, M.D.
*Ronald DeVere, M.D.

Section of Social Work
Pamela Plimmer, A.C.S.W.
Marguerite Papademitriou, A.C.S.W.
Margery Engel, M.S.S.W.
Jean Lerner, M.S.W.

808 Memorial Professional Building, Houston, Texas 77002
Telephone 713-224-5041

*Diplomate, American Board of Psychiatry and Neurology

THE FORT WORTH NEUROPSYCHIATRIC CENTER
*Herbert G. Rush, M.D.
A. Arauzo, M.D.
Sanford Lehrer, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

*Diplomate American Board of Psychiatry and Neurology

H. KORNBLIT, M.D.
Neurology—Headache Clinic

Memorial City Prof. Bldg. #176
902 Frostwood, Houston, Texas 77024

MEMORIAL NEUROLOGICAL ASSOCIATION
Neurology, Electroencephalography, Electromyography and C. T. Scan

Harris M. Hauser, M.D., F.A.A.N.
Cheor J. Kim, M.D.
Lorenzo Lorente, M.D.
1740 West 27th, Suite 315, Houston, Texas 77008, 713 861-4516
7777 Southwest Fwy., Suite 1004, Houston, Texas 77074, 713 772-4600

Radiology

ROYAL WERTZ, M.D., F.A.C.R.
Practice Limited to Radiology

800 Rusk Street, Amarillo, Texas 79106, 373-8324

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D., D.A.B.R.

RADIOLOGY
109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

KARL THORD DOCKRAY, M.D.
Diplomate, American Board of Nuclear Medicine
Diplomate, American Board of Radiology
Roentgenology, Nuclear Medicine, Xeromammography
Mobile Film Service for Area Nursing Homes

763-5774 Office 765-7701 Page 762-0471 Mobile
Lubbock, Texas

Rheumatology

DON E. CHEATUM, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Rheumatology
Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204, 823-4151

RHEUMATOLOGY
Roy M. Fleischmann, M.D.
Diplomate American Board of Internal Medicine

Rheumatology Consultation of Physician Referral

3707 Gaston Avenue, Suite 810, Dallas, Texas 75246; 827-0868

Thoracic Surgery

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.
Maruf A. Razzuk, M.D.

DRS. PAULSON, URSCHEL, RAZZUK AND ASSOCIATES
Thoracic and Cardiovascular Surgery

1201 Barnett Tower
3600 Gaston Avenue, Dallas, Texas 75246, 824-2503

JOHN L. KEE, JR., M.D.
Thoracic Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246, 826-5184

ALLAN L. GRAHAM, M.D., F.A.C.S.
KARAMAT U. CHOUDHRY, M.D., F.A.C.S.
Diplomates American Board of Surgery and Board of Thoracic Surgery
ROBERT W. MILEY, M.D.
Diplomate American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates

800 Eighth Ave., Suite 626, Fort Worth, Texas 76104, 332-7878

Thoracic Surgery Associates
ROBERT E. CARR, M.D., F.A.C.S.
ROBERT N. McGEHEE, M.D.
Thoracic and Cardiovascular Surgery
Diplomates American Boards of Surgery and Thoracic Surgery

532 Medical Plaza, 800 Eighth Ave., Ft. Worth, Texas 76104, 332-2720

HECTOR O. YANES, M.D., P.A., F.A.C.S., F.A.C.C.
Cardiac, Vascular and Thoracic Surgery

Diplomate American Board of Surgery and
American Board of Thoracic Surgery

432 Medical Plaza, 800 Eighth Ave.,
Fort Worth, Texas 76104 332-1947

RICHARD E. WOOD, M.D.
Cardiac, Thoracic and Vascular Surgery
Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue, Suite 404, Dallas, Texas 75246; 214 827-3890

Hours By Appointment

Urology

JO C. ALEXANDER, M.D., FOSTER FUQUA, M.D., ELGIN W. WARE, JR., M.D., GEORGE E. HURT, JR., M.D., DONALD E. JOHNSON, M.D. & ASSOCIATES L. MICHAEL GOLDSTEIN, M.D., THOMAS P. REILLY, M.D.
Urology

3600 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC
Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109

Dolphus E. Compere, M.D., F.A.C.S.
Grant F. Begley, M.D., F.A.C.S.
Hugh Lamensdorf, M.D., F.A.C.S.

Diplomates of American Board of Urology

H. M. GIBSON, JR., M.D., F.A.C.S.
ABEL GARDUNO, M.D.
Certified by American Board of Urology
Practice Limited to Urology

512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephone 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
NEWTON F. McDONALD, M.D.
JAMES E. MORNEAU, M.D.
Practice Limited to Urology

1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

DONALD J. NEESE, M.D.
H. R. WAGNER, M.D.
Practice Limited to Urology

218 Hermann Professional Building
Houston, Texas 77025, Telephone: 713 521-9538
400 Medical Center Blvd., Suite 207
Webster, Texas 77598, Telephone: 713 332-2466

EUGENE R. TODD, M.D., P.A.
Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

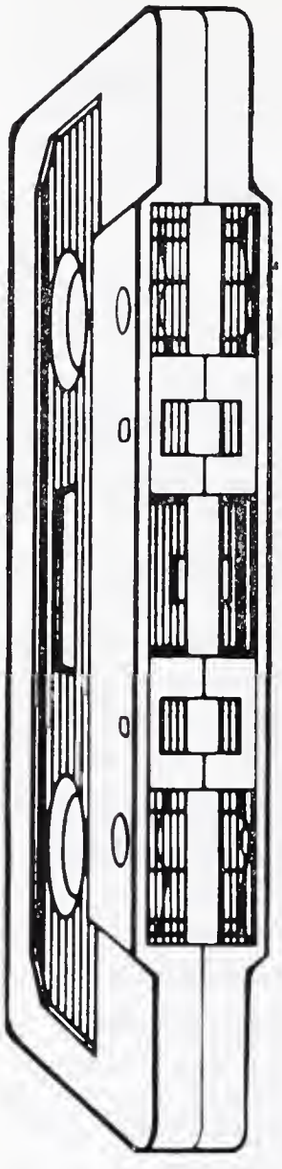
3434 Swiss Ave., Suite 406, Dallas, Tex. 75204, 214 826-3500

DALLAS UROLOGY ASSOCIATES
David D. Reisman, M.D.
Donald J. Logan, M.D.
Allen S. Plotkin, M.D.
Donald L. McKay, M.D.
Practice Limited to Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

DIRECTORY RATES & DATA: Space is available to TMA members at $12.50 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. Section headings are limited to those specialties designated by the American Medical Association. A list of these specialties is available upon request. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Straight Talk from TMA



on issues affecting you

On one cassette hear lawmakers and medical experts probe:

- malpractice insurance
- drug legislation
- national health insurance
- Medical Practice Act changes
- Medical care costs
- Medicaid/Medicare
- Other vital issues

Experts at the 1977 Update on Legislative Issues conference included: Texas Secretary of State Mark White; AMA Past President Max Parrott, M.D.; Frank Jirka, M.D., of the AMA Board of Trustees; 4 key legislators and 11 other authorities.

ONE CASSETTE HAS EXCERPTS OF IT ALL

Order Today

To: Dept. of Communication
Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

Please send_____1977 Update on Legislative Issues tapes at $5.00 each.
(No.)

My check for $_____is enclosed, payable to Texas Medical Association.

Send to: _____
(print or type) (Name)

(Address)

(City, state, zip)

Classified Advertising

Physicians Wanted

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from the big city problems. Call collect Dr. David M. Pogue at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6861.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6861.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-5351.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6861.

PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6388.

PSYCHIATRIST, board certified or eligible needed for modern forensic psychiatry program. Texas license required. Salary $34,000+. Immediate openings. Call or write: Robert B. Sheldon, M.D., Superintendent, Rusk State Hospital, P. O. Box 818, Rusk, Texas 75785; 214-683-5481.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6861.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic; adjacent to 86 bed hospital, recently remodeled. Salary $40-48,000 per year. Partnership available after trial period. Contact Willis G. Youens, Jr., M.D., 105 N. Grohmann, Weimar, Texas 78962; 713-725-8545.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

EMERGENCY DEPARTMENT GROUP, HOUSTON AREA, EXPANDING—choice of salary or fee-for-service with guarantee—malpractice paid—Call 713-861-7942 or write Greater Houston Emergency Physicians Association, 625 West 19th, Houston, Texas 77008.

FAMILY PRACTICE—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas 512-672-2811.

FAMILY PRACTITIONER WANTED to join two established family practitioners in Trinity, Texas. Former partner is leaving November 1976 for residency. A large ready made practice is available now. You are invited to investigate clinic and hospital facility, compatibility, economic and environment of rural practice in an outstanding recreational area that includes 2,000,000 acres of East Texas forest, 90,000 acre Lake Livingston, various golf courses, marinas, and country club developments. All guarantees, etc. are negotiable. Bring your wife. Sam R. Barnes, M.D. and J. Richard Cook, M.D., P.O. Box 672, Trinity, Texas 75852.

PSYCHIATRIC RESIDENCY in approved three-year program. Effective connections with universities, medical schools, private clinics and community centers. Outstanding faculty and programs. Stipends with Texas license are $15,000, $16,000 and $17,000 per year. In addition, now offering residency in child psychiatry. For full information, write to Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

CHILD PSYCHIATRY RESIDENCY may be taken before or after adult psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psychopharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed in-patient unit for children. Liaison with graduate schools, medical school and community programs. Stipends: First year, $15,000; second year, $15,000; third year, $17,000; fourth year, $18,000. Contact Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

INTERNIST—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

PEDIATRICS—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-572-2811.

FAMILY PRACTICE, GENERAL PRACTICE—Wanted immediately to join physician staff in rural community one-hour from Dallas-Fort Worth area. Extremely active practice with good benefits and an opportunity to enter into the corporation. Practice is with physicians clinic, 25-bed hospital, and 42-bed nursing home within the same building complex. Excellent arrangement for family practice. For further information contact Roger E. Marks, M.D., 817-897-2215 or 817-897-4435; Glen Rose, Texas.

EMERGENCY MEDICINE GROUP PRACTICE in Texas. Salary $44,000 with many fringe benefits. Send resume to Houston E.P.A., 8700 Commerce Park Drive, Suite 121, Houston, Texas 77035.

WANTED: INTERNIST TO JOIN busy solo internist in new office. Complete clinical laboratory facilities plus x-ray. City of 25,000 population in Northeast Texas. Drawing area of 100,000. Two new hospitals. High caliber medical community. Excellent recreational facilities; good schools and churches. Ideal family city. Please reply to Ad-525, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EXCELLENT OPPORTUNITY FOR ONE OR TWO FPs. North Central Texas, small town, large lake. Large cities nearby. Exceptional recreation on doorstep. Clinic adjacent to new hospital. New schools, churches, homes. On-call time with three others. Solo or group. Salary guarantee. Growing area. Help needed badly. Please reply to Ad-563, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN WANTED: FAMILY CARE AND CHRONIC. Hospital facilities available ten miles. Clinic space available downtown Kemp. Pharmacy available. 45 miles southeast Dallas. Close to Cedar Creek Lake, fastest growing recreational-retirement area in Texas. Projected 100,000 population by 1980 in area. Country club, golf course, three miles. Excellent opportunity. Please reply to Edmund Horton, Ph., P.O. Box 449, Kemp, Texas 75143; phone 214-498-2011.

GENERAL PRACTITIONER WANTED—Growing hospital in progressive East Texas town near metroplex needs an ambitious general practitioner to join staff. Community and hospital very cooperative in helping to establish your practice. Call (214) 845-2281, or write to Milton Bolgiano or Paul Bennett, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75547.

WANTED: FAMILY PRACTITIONER TO JOIN three man group. East Central Texas. New joint commission approved 30 bed hospital. Airport. New junior-senior high complex. Railroad division point. Small industry. Primary income ranching. Three fishing lakes. Deer, quail, dove hunting. Country club. No initial investment necessary. Contact Drs. Gage, Cox or Halbert, 315 Main Street, Teague, Texas 75850, 817-739-2551.

WANTED: PSYCHIATRIST/NEUROLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

FP, PED, INT NEEDED for 18 member group in Dallas area. 100 bed fully accredited hospital. Minimum $2500 month guarantee plus bonus. Benefits include profit sharing, pension plan, good vacation plan, malpractice insurance, time off for post graduate training. Contact: North Texas Clinic Association, 3330 S. Lancaster Road, Dallas, Texas 75216.

PEDIATRICIAN WANTED: Three associated board certified pediatricians with 20 year practice. Position open July 1977 when one associate leaves to pursue different specialty. Office in Northeast Dallas, choice Dallas, Richardson, Highland Park schools. Large patient drawing area. Middle to high middle class income patients. 300 bed hospital two blocks away. Ad-677, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $10.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST with training in allergy. Nothing to buy except office equipment. $200,000 net annual income. Retiring from practice July 1, 1977. V. E. Friedewald, M.D., F.A.C.P., 2203 West Tennessee, Midland, Texas; 915-682-5385.

TEXAS PRACTICES. Economic and professional climate excellent. Texas now reciprocates with all States except Florida. Have requests from physicians in communities for additional physicians, usually in the same field. City suburbs, small and medium size towns. Attractive financial guarantees. No fee to physician. Please write with C.V. and preferences to Sanford Smith, Professional Practice Management, Inc., 1102 Kingwood Drive, Humble, Texas 77339.

FAMILY PRACTICE ASSOCIATE—Southeast Texas town 100 miles east of Houston. General area population 70,000. Hospital privileges available at local accredited hospital. This is a well developed practice that requires no OB or surgery unless desired. Full time emergency room physicians are available; therefore, minimal emergency room "off hour" coverage required. Malpractice insurance premium paid. No initial investment required. $42,000 salary guaranteed for first year with opportunity to participate in ownership of practice after first year. Subsequent earnings potential excellent. Possible to exceed $100,000 2nd year. Medical-Dental Management, Inc., P.O. Box 55967, Houston, Texas 77055, or call 713-468-5875.

ORTHOPEDIC SURGEON NEEDED for 70 bed community hospital near Dallas. About 40 fractured hips admitted per year; other fractures can be estimated using this number as a guide. Medical staff of 15 members would refer all orthopedics. Reply to Ad-687, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL INTERNIST AND FAMILY PRACTITIONER NEEDED to join nine man group in Clifton, Texas. Located in the heart of Texas, 30 miles NW of Waco: 15 miles from Lake Whitney. Good fishing; excellent hunting; new modern golf course. Excellent schools and churches in a growing progressive community and directly associated with a 75 bed, Hill Burton hospital which is fully accredited by the joint commission. Terms open at first with partnership in future. Please contact V. D. Goodall, M.D., Clifton Medical & Surgical Clinic Association, Clifton, Texas 76634. Telephone 817-675-8621 or 675-3113.

LOCUM TENENS NEEDED June, July, August 1977. Salary could be arranged. Association a strong possibility, if desired. Contact 2601 Hospital Blvd., Corpus Christi, Texas 78405; 512-884-3966 (call collect).

FP/GP WANTED: Morton (Cochran County), Texas. 55 miles west of Lubbock. Solo practice, fee-for-service, with other physicians in clinic. One GP in area. Office space available, fully furnished, Cochran Memorial Hospital and Clinic. Income dependent upon how hard willing to work. Open staff, 30-bed hospital. County seat, good churches, airport. Major income farming, ranching, oil fields. For further information contact: Truman Swinney, Cochran Memorial Hospital and Clinic, 201 East Grant, Morton, Texas 79346; 806-266-5565.

GENERAL PRACTITIONER WANTED: Due to retirement of one of staff because of ill health, urgently need qualified GP. No investments; no house calls; excellent schools, churches, recreational facilities, two fine junior colleges. Retiring doctor has been netting $50,000 per annum. All members of staff on the staff of local, fully accredited general hospital. Call or write Stripling Clinic, 555 So. Jackson, Jacksonville, Texas 75766. Phone 214-586-2278.

THE BEAUMONT STATE CENTER for Human Development, a facility of the Texas Department of Mental Health and Mental Retardation is now accepting applications for the positions of psychiatrist and general physician. Texas license required. Salary negotiable depending on qualifications. For more details write or call: J. M. Mericle, Personnel Officer, Beaumont State Center for Human Development, P.O. Box 3846, Beaumont, Texas 77704, 713-833-1485. An equal opportunity/affirmative action employer.

PSYCHIATRIC CLINIC, SEEKING to expand medical services in the practice, has fully furnished office for family physician. Choice location, close to four hospitals. Apply D. McCann, 2616 N. Oregon, El Paso, Texas 79902. 913-532-5232.

STUDENT HEALTH SERVICE—Beautiful campus, competitive salary and benefits, East Texas recreational area. New clinic in planning. Contact Capt. A. C. Harris USN (RET), Box 3058, Nacogdoches, Texas 75961. 713-569-4008.

PUBLIC HEALTH PHYSICIAN with Austin-Travis County Health Department in Austin, Texas. Clinical and public health experience preferable, but not required. Starting pay approximately $30,000, plus fringe benefits. Regular hours, 40 hours per week. Must have valid license to practice medicine in State of Texas. Contact Dr. Meisenbach, Austin-Travis County Health Department, 1313 Sabine, Austin, Texas 78701; telephone 512-474-6581.

ATTENTION FOREIGN MEDICAL GRADUATES AND JUNE GRADUATES. Excellent opportunities available in numerous cities throughout Texas. No charge to the physician. Write The Rural Doctors Group, a physician-search placement service; enclose C. V. and photo, 507 First Federal Plaza, 200 E. 10th Street, Austin, Texas 78701.

GENERAL SURGEON AND ORTHOPEDIC SURGEON NEEDED for 10 busy GP's in charming city of 16,000; elegant Victorian architecture; diversified economic base. Private, modern 70 bed hospital. Peaceful rural setting 25 miles from large metropolitan area with unlimited cultural opportunities. Historic homes or exclusive developments. Nearby lake; boating, hunting and fishing. Call Rick Redington, Family Practice Association, 1410 West Jefferson Street, Waxahachie, Texas 75165. Office 214-937-1210; home 214-937-1640.

PRIVATE PRACTICE OPPORTUNITY with guaranteed success now available in a modern 25-bed, JCAH-approved private hospital and a new four-doctor clinic; located in the heart of the Gulf Coast industrial center, 20 minutes from both downtown Houston, Texas and the Space Craft Center; clinic furnishes all overhead including rent, supplies and personnel; to insure success, a guarantee of $3000 per month for six months is offered; earnings limited only by personal desire as you maintain a private fee for service practice. For details, contact Floyd D. Pendergrass, Ph.D., Executive Director, Deaton Hospital, Inc., 208 North Main Street, Galena Park, Texas 77547. Phone or wire collect 713-672-6311.

CARDIOLOGY & INTERNAL MEDICINE SUBSPECIALTIES. Amarillo Diagnostic Clinic composed of pure internal medicine. Beautiful new clinic building in a modern progressive city of 150,000 with excellent hospital facilities. Contact H. Wayne Smith, M.D., P.O. Box 3460, Amarillo, Texas 79106; 806-353-3571.

PSYCHIATRIST: Board certified/eligible psychiatrist interested in unique psychiatric opportunity as program chief to lead mental health team in geriatric, behavior modification, forensic or general psychiatry program. Requires motivation and ability to assume responsibility, exercise authority, plan and direct innovative programs. Prior experience not necessary. Salary dependent on qualifications. Centrally located, close to metropolitan and cultural centers. Small town living is safe and secure. Excellent schools, colleges and universities available. Many lakes, hunting areas and recreational facilities. Excellent vacation and insurance benefits. Malpractice complete coverage by State of Texas. Salary $37,800-$42,800. Contact: Robert B. Sheldon, M.D., Superintendent, Rusk State Hospital, Rusk, Texas 75785. An equal opportunity/affirmative action employer.

INSTITUTIONAL PHYSICIAN — part time (12 hours or more per week) salaried. Particularly attractive for someone new to the area or perhaps retired. For particulars, call Mrs. Nancy Agee, Hospital Administrator, 214-542-2623, ext. 244, McKinney Job Corps Center, P.O. Box 750, McKinney, Texas 75069. An equal opportunity employer.

BELLVILLE, TEXAS IS CONSTRUCTING a new clinic building and is in need of an internist and a pediatrician to fill its staff of specialists. Less than an hour from Houston, this is a perfect place to raise a family. Call or write H. A. Cope, Administrator, P.O. Box 148, Bellville, Texas 77418; 713-865-3141.

PATHOLOGIST WANTED. Progressive West Texas Hospital is currently seeking experienced staff pathologist. This will be a challenging and secure position for the right individual. Administrative experience desirable. Salary negotiable. Excellent working conditions, fringe benefits. Please reply to Personnel Department, Medical Center Hospital, P.O. Box 7239, Odessa, Texas 79760. An equal opportunity employer.

DIRECTOR OF RADIOLOGY. Large West Texas Hospital is currently seeking experienced department head. Prefer 5+ years experience as clinical technologist. Administrative experience necessary. Experience with construction of new radiology facility helpful as department will be moving into new building in the near future. Please send resume and salary requirements to: Personnel Department, Medical Center Hospital, Odessa, Texas 79760. An equal opportunity employer.

CERTIFIED REGISTERED NURSE ANESTHETIST. Expanding modern hospital in progressive and friendly West Texas city is seeking an experienced CRNA. In our new expanded surgical unit you will be challenged with open heart surgery, lens phaco-emulsification and many other special procedures. Our 350 bed referral center for 17 counties has an up-to-date Inservice Department. Continued educational opportunities are available at local colleges and university. Excellent fringe benefits and working conditions. Please send resume and salary requirements to: Ad-692, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EL PASO TEXAS—SUNBOWL COUNTRY. Large multispecialty group with clinic and adjoining hospital on growing edge of city needs physicians in family practice, respiratory, neurology, gastroenterology, otolaryngology. Salary plus percentage. Malpractice, medical and life insurance benefits. Country club. May purchase shares after one year. Please call Eastwood Medical Center, 915-592-0201, ext. 1680.

FAMILY PRACTITIONER NEEDED BY 15-man multispecialty group. Excellent rotating coverage. Five weeks vacation. Malpractice insurance. Salary and percentage according to qualifications. We want an individual geared to hard work and long term goals. El Paso is the place to be in the future and we are the place to be in El Paso. Please call 915-592-0201, Eastwood Medical Center, ext. 1680.

RADIOLOGIST FOR 200-bed hospital and 15-physician clinic. Needed to help present radiologist in special procedures, routine films, ETX. Salary and benefits. Please call Eastwood Medical Center, 915-592-0201, ext. 1680.

EMERGENCY PHYSICIANS $60,000. El Paso, Texas-Sun City. Two year old hospital and clinic growing side of town. Please call 915-592-0201, ext. 1680.

Situations Wanted

DERMATOLOGIST: Board certified, 10 years successful solo practice in one location. Wishes to relocate in larger city or metropolitan area either group or solo practice. Please reply to Ad-681, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PSYCHIATRY — male, 39 years old with D.P.M., F.R.C.P.(C), A.B.P.N. Widely experienced in psychiatry for last 10 years. Seeking position in university, CMHC, state hospital or private practice. Available from beginning of 1977. For further information contact Ad-683, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OB/GYN—female, 34 years old, specialty board certified in UK. Board written passed in 1976. Practicing OB/GYN as specialist for last three years. Special experience in laproscopy. Seeking position in private practice, hospital or teaching. Available from beginning 1977. For further information contact Ad-684, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTICE PHYSICIAN, residency trained, board eligible, FLEX, age 29 would like associate or group practice in small to medium sized town in East Texas. Presently completing military obligation, available in summer 1978. Please reply to Ad-689, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

UROLOGIST: 35 years old. Board eligible. Available July 1, 1977. Prefers solo practice but will consider group practice. Must be an area within short driving distance to Houston, Texas. Please write to Ramon L. Navarro, M.D., 551 Hallandale Drive, Akron, Ohio 44313 or call 216-666-3571 after 5 p.m. or 216-384-6111 during working hours.

YOUNG BOARD ELIGIBLE GENERAL SURGEON with family seeking a position in general surgery beginning July, 1977. Now completing one year fellowship in pediatric surgery. Two years experience as base surgeon in USAF hospital in Texas. Prefer group practice or partnership in small or medium size community near larger city. Texas licensed. Clifford A. Lakin, M.D., 24 Archdale Street, Charleston, South Carolina 29401.

CARDIOLOGIST—Board certified internal medicine, finishing 2nd year cardiology fellowship at a well known hospital in Dallas with extensive training in coronary angiography, seeks private practice for invasive or clinical cardiology in group or solo. Reply to Ad-690, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY NURSE PRACTITIONER, MSN, MHS, certified, licensed, and experienced in family practice seeks position with family physician or family physician group in small Texas community (population 5,000-25,000). Please reply to Ad-691, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

AUSTIN—NEW PROFESSIONAL PARK. Internist, GP, FP, Peds, OB/GYN sought to associate in group setting for solo practice. Physician population has not kept pace with accelerated growth. University town, new hospital. Call or write: Cannon Professional Park c/o 3913 Medical Parkway, Austin, Texas 78756. Telephone 512-451-8489.

NEW ULTRA-MODERN, cedar and glass office space for lease in Northwest San Antonio, one block from loop 410 and one exit from IH 10. Across the road from Park North Hospital, the building is divided into six separate office spaces, four of which are occupied by 4 general dentists, one orthodontist, and three oral surgeons. Up to 4700 sq. ft. available at 60c sq. ft. with a very liberal allowance to finish out to your specifications. Ideal situation for the family practitioner or pediatrician. Contact Mossrock Venture, 2803 Mossrock, Suite 201, San Antonio, Texas 78230.

USED Picker Radiographic and Fluoroscopic x-ray unit complete with a 500 MA single phase generator, 9 inch Image Intensifier, TV, and a linear tomography attachment. Used M-4 Kodak automatic film processor. If interested contact Chairman, Radiology Department, Malone-Hogan Clinic, 1501 W. 11th Place, Big Spring, Texas 79720; phone 915-263-1211, ext. 194.

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

GROWING NORTHEAST SAN ANTONIO, 55,000 population. No MDs. Five examining rooms, reception, large personal office, carpeted, air conditioned. Rent free details contact W. H. Gibson, 512-656-1166, night 512-651-6449.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

BACKPACKING/MOUNTAINEERING: Sangre de Cristo Range, Needle Mountains, Sawtooth Mountains, Beartooth Plateu, Mount Assiniboine and Mount Robson. Bold, innovative route-finding, technical excellence and environmental sensitivity. No experience required. Twelve and 24 days. Outback Expeditions, Box 444, Austin, Texas 78767.

Wichita Falls Clinic

501 Midwestern Parkway East, Wichita Falls, Texas 76302

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Clark W. Brazil, M.D.

GENERAL THORACIC AND VASCULAR SURGERY
Cecil H. Meares, M.D.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
David G. Borman, M.D., F.A.C.S.
Richard H. Moore, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOLOGY AND RADIOACTIVE ISOTOPES
Thomas K. Bose, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
Joseph Bilder, Jr., M.D.
George W. Slaughter, M.D.

INTERNAL MEDICINE
P. K. Smith, M.D., F.A.C.P.
I. L. Humphrey, Jr., M.D.
Preston McCall, M.D.
Julian C. Sleeper, M.D., Cardiology
David M. Pogue, M.D., Cardiology
Wendell I. Wyatt, M.D.
Lowell L. Harvey, M.D.

FAMILY PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
James T. Cook, M.D.
Madeleine Kent, M.D.

UROLOGY
John C. Wurster, M.D.

OBSTETRICS AND GYNECOLOGY
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
James M. Missler, Administrator

INDUSTRIAL PHYSICIAN

Full time staff physician is needed in Du Pont plant near Victoria, Texas. This petrochemical plant with 1300 employees, has a well equipped plant medical center with excellent preventive medical program. 40 hour week. No malpractice insurance needed. Competitive salary and liberal benefit package are offered.

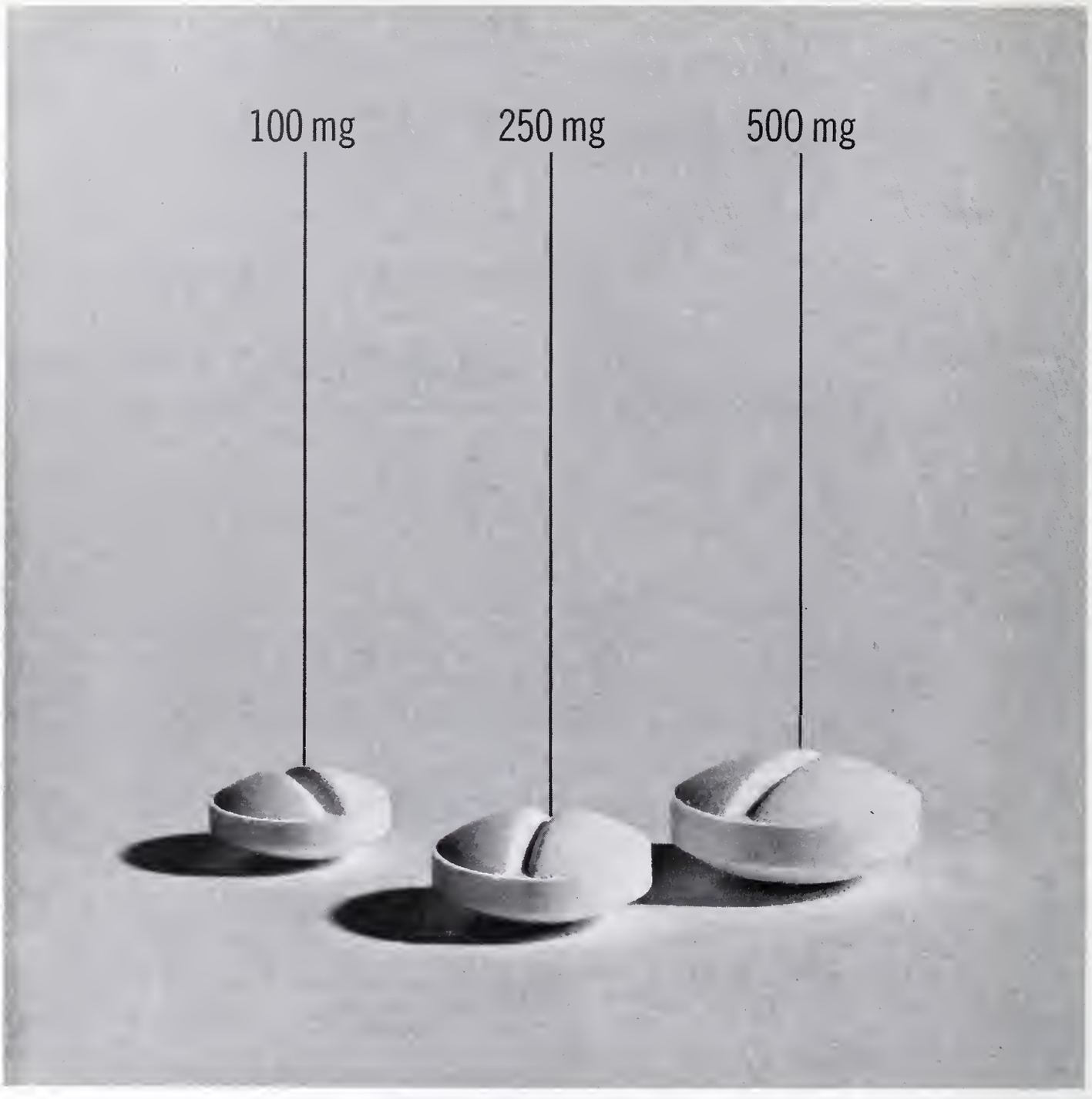
If interested, write or call:
Oscar Rhode, M.D.
P. O. Box 2626
Victoria, Texas 77901
Phone (512) 573-3211 Ext. 324

E. I. DU PONT DE NEMOURS AND COMPANY INCORPORATED
An Equal Opportunity Employer M/F

Advertising Directory

American College of Physicians	107
Beltone Electronics	87
Beverly Hills Hospital	97
Blue Cross-Blue Shield of Texas	23
Borden, Inc.	12
Burroughs Wellcome Co.	90
Chromalloy	41
Comatic Laboratories	3rd Cover
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
E. I. DuPont De Nemours & Co., Inc.	121
Gentec Hospital Supply Co.	103
Insurance Corporation of America	45
Mead Johnson Laboratories	124
Kelsey-Seybold Clinic	81
Eli Lilly and Company	46
Medical Arts Clinic of Corsicana	108
The Medical Protective Company	40
Merck Sharp & Dohme	33-34
Joe Nigrelle Insurance Agency	108
Parke Davis & Co.	5
Pasadena Bayshore Hospital	75
Pennwalt Corp.	36-37
The Pharmaceutical Manufacturers Association	38-39
The Prudential Insurance Company of America	9
Ben H. Quinney, M.D.	108
Roche Laboratories	1-2, 76, 88, 104-105
Roerig & Co.	18-19
Reproductive Biology Research Foundation	40
Schick Hospital	82
Scott and White Clinic	Back Cover
Smith Kline & French	89
Starlite Village Hospital	81
Surgical Garment Shop	85
Texas Bank and Trust Company	81
Texas Medical Association	
Annual Session	99-102
Automobile Leasing Program	98
Memorial Library Fund	94
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchins, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	108
Upjohn	122
Warner-Chilcott	4, 17, 106-107
Wichita Falls Clinic	121
Physicians' Directory	109-118
Classified Advertising	119-121

Publication of an advertisement in *Texas Medicine* is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.



Tolinase®
tolazamide, Upjohn

Please contact your Upjohn representative for additional product information.

Upjohn

J-5695-6

©1977 THE UPJOHN COMPANY

Letters

Consultation or Referral

Dear Ms Baker:

I would like to point out what I think to be a serious misstatement in Dr. M. L. Ross' editorial in the November 1976 issue of *Texas Medicine*, "Consultation or Referral and the Primary Care Physician." He states, "A consultation is a joint venture, but a referral is not."

As a practicing family practitioner I depend not only upon consultations for my learning and improvement of management, but very much on referrals as well.

While many problems may require referral, not to have feedback from the specialist and not to have the patient referred back to me for continuing management once the acute problem has subsided is to detract seriously from the educational aspects of a particular case.

One of the most satisfying relationships that I have had in private practice has been that of a constant teaching relationship with physicians to whom I refer my patients.

While it is true that "the selection of a physician for future problems is made by the patient," I fully expect the physician to whom I have referred the patient to give me follow-up information on the patient and to encourage the patient to return to me for follow-up on the problem so that I may learn something from the case.

I trust that Dr. Ross' statement was simply a poor choice of words and not a reflection of what he is in fact teaching medical students and family practice residents at Galveston.

Barry E. Phillips, MD, Rosebud.

Dear Dr Phillips:

I appreciate your comments on the editorial concerning consultations and referrals.

We certainly agree that we learn a great deal from the physicians to whom we refer our patients. The intent was to indicate that the doctor to whom we refer is the captain of the team during that particular episode of illness. We certainly teach our students that these patients are to be referred back to us so that we can return to the position of captain of the team after that particular episode.

Thanks for your interest.

M. L. Ross, MD, Galveston.

Winter Boating Accidents

Dear Ms Baker:

I recently read an article which told of several deaths resulting from boating accidents in which people fell overboard. Accidents like this are far more dangerous in the wintertime than in the summertime, because of the problem of hypothermia, the reduction of the body's vital core temperature.

Even a minor boating accident can cause disaster due to the cold temperature of the water at this time of the year. Someone who is immersed in water at the 60° range may possibly die in a short time. Allergic reactions to cold can have the same effect.

I think the public should be told of the serious danger of falling overboard into the cold water, and encouraged to take the necessary precautions to avoid such accidents.

Claude A. Frazier, MD, Asheville, NC.

Letters to the editor are welcome for consideration in this column. The Board of Publication and the editors reserve the right to excerpt letters in accordance with available space and editorial judgment as recommended by consultants. Neither the editors nor TMA shall be, in any manner or to any extent, directly or indirectly, responsible for views expressed by authors in this column.

consider the effect on coexisting diabetes when you prescribe a vasodilator*

(POSTERIOR VIEW OF PANCREAS)

no interference in the management of the diabetic patient has been reported with

VASODILAN®
(ISOXSUPRINE HCl)

the compatible vasodilator TABLETS, 20 mg.

*__Indications:__ Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation

Composition. Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg.(1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat No. 3,056,836

Mead Johnson LABORATORIES

© 1977, MEAD JOHNSON & COMPANY, EVANSVILLE, INDIANA 47721 U.S.A. MJLS-4117R1

Editorials

FACT, NOT FICTION: MEDICINE'S BASIS FOR RATIONAL DECISIONS

The health care system is being used as a frontier for social change. Our resources, however, are clearly limited, and we have some tough decisions to make if we are to balance resources and needs. At the same time that society has deemed health care a right of each person according to his need, medical science has developed a style of medicine which, if extended indiscriminately, would cost far more than this nation could pay.

Medicine's leaders need to develop information on which to base rational decisions about responsible programs, but to do so, we must separate fact from fiction—we must interpret the meaning of statistics rather than accepting them blindly.

Passing the buck from local to state to national levels helps no one, but our overall goals can be achieved by unified efforts at various levels. The physician, for example, is responsible first to his own patients; the county society gives first priority to problems upon which it can have maximum impact close to home; the AMA devotes itself to problems that are felt throughout the country.

Since our patients, government, and the media listen at many different levels, it is important that we adopt consistent positions based on fact. Through mutual efforts, we already have made gains in coping with the malpractice crisis, and we have eliminated some of the unwise features from the Health Manpower Act.

Now, we need to focus our efforts on the costs of medical care, because the need to moderate costs has led to proposals for HMO's, PSRO's, low cost purchase of generic drugs, etcetera, etcetera.

Gathering a solid base of facts will be difficult because there are many distortions, evasions, exaggerations, and misunderstandings.

It is a fact that high quality care is high cost care, and it is time that economists, legislators, and others admitted it. It is also a fact that physicians cannot control the major factors in escalations of hospital charges: the increase in wages and prices necessary to maintain the same level of services in the face of inflation, and the expenditures to add heretofore unavailable services.

When history is written, the 1970's will be called the "age of accountability," and our continued credibility with the public is going to rest squarely on our accountability to the public.

The awesome facts are that the American public is ready for a change in health care, and that no legislation can be effective without the good will of the AMA which has the organization to put it to work.

No longer can we afford the luxury of opposition without viable alternatives to the problems, nor can we make decisions based on desire or expediency. We must assemble hard facts, interpret them rationally, and move toward the goals they dictate.

As the umbrella organization, the AMA must constantly seek to unify us all on essentials and leave us freedom in nonessentials.

We can strive to base our decision making on truth and not desire, reality and not fantasy, fact and not fiction; and by so doing, we will satisfy some and astonish the rest (apologies to Mark Twain).

Editor's note: James S. Todd, MD, Ridgewood, NJ, presented these views during his keynote address at the AMA Leadership Conference Jan 21, 1977, in Chicago.

COMPARE INSURANCE POLICIES TO EVALUATE SALES CLAIMS

Recently an insurance agent asked to discuss disability income protection with me. Since I have been concerned over reports that some agents design their presentations to instill fear and doubt about the reliability of the Texas Medical Association's group coverage, I decided to hear him.

The agent spent most of his time presenting vague examples of things that happened to people who had group insurance. He named several professional group programs that had been "cancelled" or "dropped" by the carriers. I knew that these programs had been cancelled by the sponsoring organization, not the carrier, because transferring to another carrier benefitted insured members.

He then told of a case he "heard about" in which a surgeon could no longer tie stitches because of a hand injury. Since that surgeon still could do general practice, no further claim payments were made by the company. The agent did not know the name of the physician or the city, nor could he cite any specific facts. He just "heard."

Several times, my visitor hinted that participants in the TMA plans were issued certificates of insurance and that the terms of the plans were governed by the master policy, which most physicians had never seen. A shade of truth gives such allusions a presentable face: There are some contractual and management agreements in the master policy which do not appear in certificates. They were accepted and approved by our legal counsel and by the governing bodies of the Association. The master policy is available at TMA headquarters for inspection by any member, and to imply that something detrimental is hidden away in it is absurd.

Finally, the agent implied that a handful of people are responsible for making decisions about our program, and that they do best for 75%, but the other 25% (who are a little older or sicker) are not considered and have no recourse. This implication questions the credibility of the members of the Committee on Association Insurance Programs, Council on Medical Service and Insurance, Board of Trustees, Executive Board, and the House of Delegates who have approved every phase of the insurance programs for more than 21 years. No change has been detrimental to older participants or to the sick. Actually, these members often have benefitted by changes along with all other participants.

Most insurance agents do not resort to selling tactics of this nature. The few who do are violating state insurance laws which prohibit the use of misleading statements, twisting of facts, or incomplete comparisons during presentations.

Should an agent try such tactics on you, I suggest that you ask him to prepare, in writing, a complete comparison of his policy with that of any other policy he chooses to mention in his presentation. Point out that the comparison must include all benefits, restrictions, exclusions, qualifying circumstances, termination dates, and rate projections, and must be suitable for examination by anyone you choose.

A complete comparison will enable you to fairly and fully evaluate any gain or loss among policies and provide a basis for a factual decision on your part. Do not be timid about making the request. A good agent will want you to know exactly what you are being asked to buy.

Charles W. Castle, MD, Liberty,
Chairman, TMA Council on Medical Service and Insurance

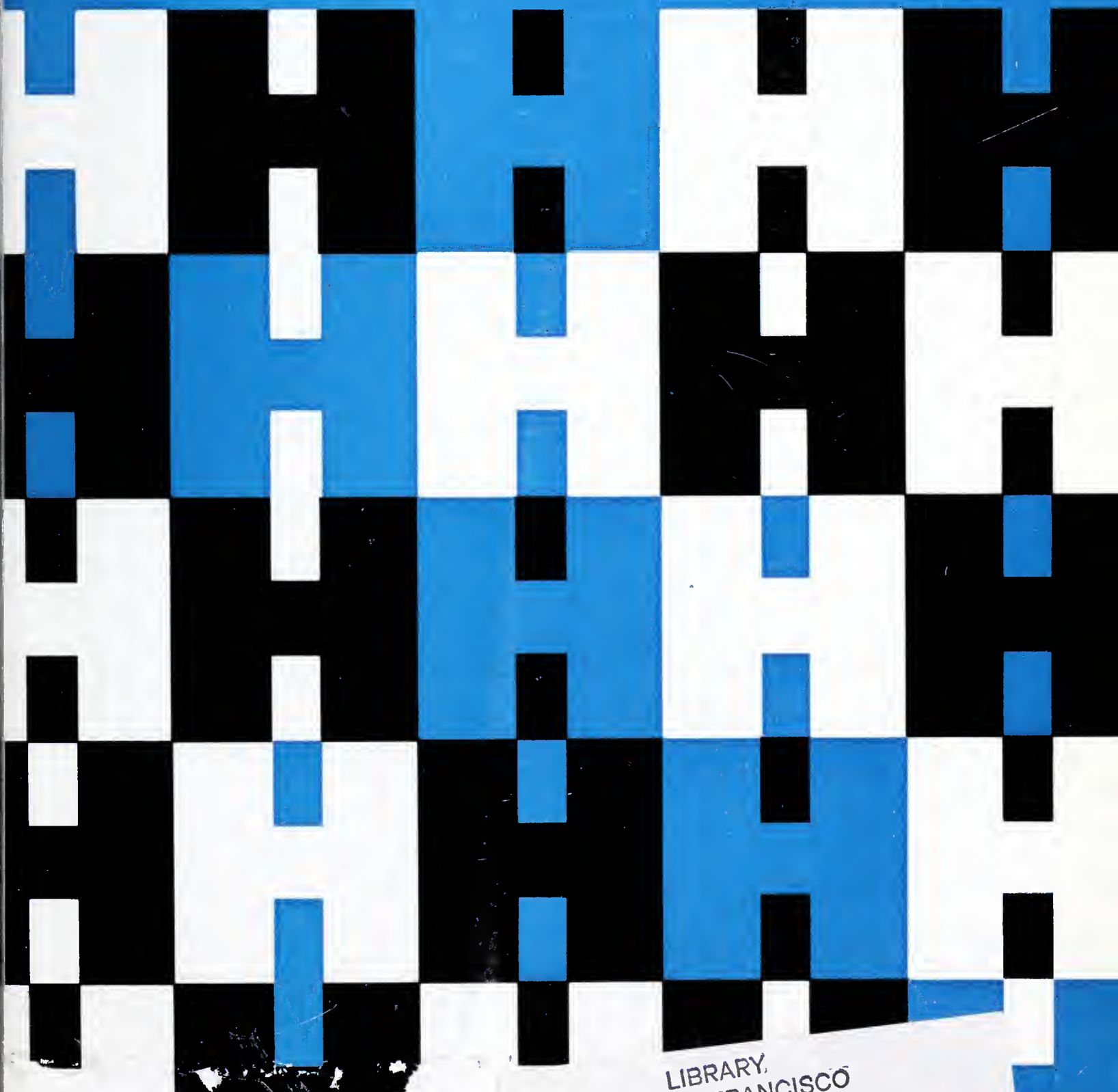
Apr77

TexasMedicine

Diagnosing and treating allergies Rocky Mountain spotted fever

Dealing with the impaired physician Health legislation

The future in Houston is now



LIBRARY,
U.C. SAN FRANCISCO
APR 19 1977

Torbett-Hutchings-Smith Memorial Hospital
and Torbett-Hutchings-Smith Clinic

322 Coleman Street — Marlin, Texas 76661 — Telephone: 883-3561

Post Office Box 60

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M. D., F.A.C.S.
Cecil A. McRee, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M. D.
C. G. Brown, M.D.

VASCULAR SURGEY
Cecil A. McRee, M.D., F.A.C.S.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

TRAUMATIC AND ORTHOPEDIC SURGERY
D. R. Swetland, M.D., F.A.C.S.

ALLERGY
S. W. Hughes, M.D.

CARDIOLOGY
W. F. McKinley, Jr., M.D.

OBSTETRICS AND PEDIATRICS
William Pickvance, M.D.

RADIOLOGY
J.M. Brown, M.D., F.A.C.R.

PATHOLOGY
Ronald E. Henderson, Jr., M.D.
David M. McTaggart, M.D.
S. M. Bunn, Jr., M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

NEUROSURGERY
Harry W. Slade, M.D., F.A.C.S.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Associate Administrator:
Larry Parsons

Director-Coordinator, Nursing Service:
Vera Bee, R.N.

Director of Patient Care:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street — DALLAS, TEXAS 75211 — Telephone 823-4151

INTERNAL MEDICINE
John B. Allen, M.D., D.A.B.I.M.
Morris E. Magers, M.D.,D.A.B.I.M.
Channing Woods, M.D.
Richard C. Stone, M.D., Gastroenterology
Landon W. Stewart, M.D., D.A.B.I.M.
Cloyce L. Stetson, Jr., M.D., D.A.B.I.M.
David S. Sowell, III, M.D., D.A.B.I.M., Cardiology
Don E. Cheatum, M.D., D.A.B.I.M., and D.A.B. Rhu., F.A.C.P.
W. Mark Armstrong, M.D., D.A.B.I.M.
Sam W. Waters, M.D.
George E. Thomas, M.D., D.A.B.I.M.
Steven P. Bowers, M.D., D.A.B.I.M.

ORTHOPEDIC SURGERY
George S. Phalen, M.D., D.A.B.O.S., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
John B. Miller, III, M.D.
Vernie D. Bodden, M.D.

PEDIATRICS
Halcuit Moore, M.D., D.A.B.P., F.A.A.P.
P. E. Luecke, Jr., M.D., D.A.B.P., F.A.A.P.
Larry Gray, M.D., D.A.B.P., F.A.A.P.

GENERAL SURGERY
George P. Fosmire, M.D., D.A.B.S., F.A.C.S.
Miller S. Bell, M.D., D.A.B.S., F.A.C.S.

UROLOGY
Harry M. Spence, M.D., D.A.B.U., F.A.C.S.
William H. Hoffman, M.D., D.A.B.U., F.A.C.S.
Richard B. Dulany, M.D., D.A.B.U., F.A.C.S.

RADIOLOGY
Raymond W. Burford, M.D., D.A.B.R.
Joe B. Caldwell, M.D., D.A.B.R.
James B. Evans, M.D., D.A.B.R.

DERMATOLOGY
William N. New, M.D., F.A.A.D., F.A.C.P.

OTOLARYNGOLOGY AND OTOLOGIC SURGERY
D. W. Shuster, M.D., D.A.B.O.

OPHTHALMOLOGY
R. M. Burnside, M.D., D.A.B.O.
James M. Copps, M.D., D.A.B.O.

DENTISTRY AND DENTAL SURGERY
J. Boyd Hollabaugh, D.D.S.
William F. Walton, D.D.S.
George D. Blake, D.D.S.
Larry L. Cowsert, D.D.S.

ADMINISTRATION
C. H. Rosamond, Administrator
Jack Green, Associate Administrator

DIRECTOR OF NURSING SERVICE
Miss Billye J. Norris, R.N.

INACTIVE STATUS
George M. Underwood, M.D., D.A.B.I.M., F.A.C.P., Gastroenterology
William H. Potts, M.D., F.A.C.P., Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics and Gynecology
Adam D. Green, M.D., Surgery
B. Celia Slaughter, M.D., D.A.B.P., F.A.A.P.
John B. Bourland, M.D., D.A.B.O.G.

THE ANXIETY-SPECIFIC.

- a predictable pattern of patient response
- seldom associated with serious side effects, in proper dosage
- rarely interferes with mental acuity
- used concomitantly with many primary medications
- three dosage strengths meet most patient needs

LIBRIUM® ℞

chlordiazepoxide HCl/Roche

5mg, 10mg, 25mg capsules

Libritabs® (chlordiazepoxide) available in 5 mg, 10 mg and 25 mg tablets.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) *Capsules,* 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) *Tablets,* 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see following page.

THE ANXIETY-SPECIFIC.

Since its discovery in the research laboratories at Roche, Librium has been the object of ongoing pharmacologic and clinical investigation.

The published record on Librium is enormous. So large, in fact, we put it into a computer literature retrieval system to make it more accessible in answering your inquiries.*

It's a record that reveals a consistent pattern of patient response. A highly favorable benefits-to-risk ratio. And minimal interference with many primary medications.

Doing one thing well. Basically, that's what Librium is all about.

LIBRIUM® ℞
chlordiazepoxide HCl/Roche

ROCHE

*If you have a question about Librium or any other Roche product, write to Professional Services, Roche Laboratories, Nutley, New Jersey 07110.

Please see preceding page for a summary of product information.

Texas Medicine
VOL 73 APRIL 1977

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION
Don G. Harrel, MD, Dallas
Chairman
Sam N. Key, MD, Austin
Vice-Chairman
Walter A. Brooks, MD, Quanah
Secretary
R. Harvey Bell, MD, Palestine
C. W. Yates, MD, Rosenberg
Paul R. Meyer, MD, Port Arthur
Joe T. Nelson, MD, Weatherford

TMA OFFICERS
L. S. Thompson, MD, Dallas
President
Sheridan S. Evans, MD, McAllen
Vice-President
John M. Smith, Jr., MD, San Antonio
President-Elect
James G. Morris, MD, Lubbock
Secretary
Ben R. Keller, Jr., MD, Arlington
Treasurer
C. Lincoln Williston, Austin
Executive Director

EDITORIAL STAFF
1905 N Lamar Blvd, Austin 78705
Telephone: 512-477-6704
Marilyn Baker, Managing Editor
Rae Vajgert, Assistant Managing Editor
Elise David, Assistant Editor
Donna Billie, Editorial Assistant
Patty Mullins, Secretary

ADVERTISING STAFF
1801 N Lamar Blvd, Austin 78701
Jon R. Hornaday, Advertising Director
Anne Shelnutt, Advertising Manager

SCIENTIFIC PUBLICATION COMMITTEE
Joseph M. Abell, Jr., MD, Austin
Chairman
Robert Askew, MD, Austin
Vice-Chairman
Ernest C. Butler, MD, Austin
Jesse D. Cone, MD, Odessa
C. W. Daeschner, MD, Galveston
George A. Gates, MD, San Antonio
Tracy R. Gordy, MD, Austin
R. Maurice Hood, MD, Austin
Paxton H. Howard, Jr., MD, Temple
Joseph Lancaster, MD, Austin
Francis E. McIntyre, MD, Austin
Paul C. Peters, MD, Dallas
Richard S. Ruiz, MD, Houston
H. Irving Schweppe, Jr., MD, Houston
Theodore P. Votteler, MD, Dallas

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS
1801 N Lamar Blvd, Austin 78701
c/o Ray Riggs, Business Manager
$4 per year for members; $8 for non-members; $14 for foreign; $6 for libraries, hospitals, and universities; $4 for medical students. Single copy: $1.25.

CHANGE OF ADDRESS
1801 N Lamar Blvd, Austin 7B701
c/o Edward R. Bierschenk, Membership Director

Copyright 1977 by the Texas Medical Association. Owned and issued monthly by the Association.

Second Class Postage paid at Fort Worth, Texas, under act of March 3, 1879.

Contents

SCIENTIFIC ARTICLES

47 Diagnosis and treatment of allergic disorders — Eldon Dupree, MD

53 Corticosteroids in allergy: a 25-year review — William C. Grater, MD

66 Neutrophil functions and defects — Armond S. Goldman, MD

73 The hemiblocks: relationship to abnormal axis deviation — Ralph Letteer, MD

83 Rocky Mountain spotted fever — M. S. Dickerson, MD

90 One method for increasing the number of primary care physicians in Texas
G. Anthony Gorry, PhD; Joseph M. Merrill, MD

Features

98 Houston sets the pace for TMA's 110th Annual Session

105 The impaired physician

Editorials

145 What's happening in Austin? "Take two" to call 1-800-252-9231

145 Southeast Texas poison center fills need for regional service
Frank A. Simon, MD; Michael D. Ellis, MS

News

7 House of Delegates will consider insurance, smoking, and midwifery in May

8 Special TMA committee considers Association organization and structure

11 State Board of Medical Examiners investigates 636 individuals

13 Carter administration will cap hospital charges

14 Physicians' incomes similar to executive salaries

23 Physicians' business costs outpacing fees, AMA says

24 Polls show confidence in American medicine

Departments

29 Capital Comments

33 Meetings

40 Continuing Education

62 Information for Authors

110 Medical Newsmakers

115 Medicine and the Law

118 Medicine and Literature

121 Deaths

142 Letters

On The Cover

Houston, the fastest growing major city in the United States is setting the pace for Texas Medical Association's 110th Annual Session, May 11-15. The Session will comprise an outstanding scientific program; committee, board and council meetings; and the House of Delegates sessions. For a preview of the Session and some suggestions on how to spend your free time in Houston, see the article on page 98.

Next Month

In May we will publish articles on necrotic material found in blood filters, heparinization, toxemia of pregnancy, benign liver tumors associated with oral contraceptives, otology, and cancer chemotherapy.

Think you know all about asthma?

Then you should know all about TEDRAL.
It provides—

- □ rapid symptomatic relief, as well as prophylaxis
- □ β-ADRENERGIC ACTION THAT RELAXES BRONCHIAL SMOOTH MUSCLE
- □ α-ADRENERGIC ACTION THAT REDUCES BRONCHIAL EDEMA AND SECRETIONS
- □ synergistic action of ephedrine and theophylline for effective and prolonged bronchodilation
- □ dosage forms to meet individual patient needs

For asthma management...

Tedral® / Tedral® SA / Tedral® Elixir

Each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer), and 25 mg phenobarbital in the immediate release layer.

SUSTAINED ACTION

Each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine HCl, and 2 mg phenobarbital; the alcohol content is 15%.

WARNER/CHILCOTT
Division, Warner-Lambert Company
Morris Plains, New Jersey 07950

T-GP-74-B/W

TEDRAL®

TEDRAL® SA Sustained Action

TEDRAL® Elixir

CAUTION: Federal law prohibits dispensing Tedral SA without prescription.

Description. Tedral: each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Tedral SA: each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer); 25 mg phenobarbital in the immediate release layer.

Tedral Elixir: each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine hydrochloride, and 2 mg phenobarbital; the alcohol content is 15%.

Indications. Tedral, Tedral SA, and Tedral Elixir are indicated for the symptomatic relief of bronchial asthma, asthmatic bronchitis, and other bronchospastic disorders. They may also be used prophylactically to abort or minimize asthmatic attacks and are of value in managing occasional, seasonal or perennial asthma.

Tedral SA (Sustained Action) offers the convenience of b.i.d. dosage.

Tedral Elixir is convenient for persons who may have difficulty in swallowing tablets.

These Tedral formulations are adjuncts in the total management of the asthmatic patient. Acute or severe asthmatic attacks may necessitate supplemental therapy with other drugs by inhalation or other parenteral routes.

Contraindications. Sensitivity to any of the ingredients; porphyria.

Warnings. Drowsiness may occur. PHENOBARBITAL MAY BE HABIT-FORMING.

Precautions. Use with caution in the presence of cardiovascular disease, severe hypertension, hyperthyroidism, prostatic hypertrophy, or glaucoma.

Adverse Reactions. Mild epigastric distress, palpitation, tremulousness, insomnia, difficulty of micturition, and CNS stimulation have been reported.

Average Dosage. *Prophylactic or Therapeutic.*

Tedral: *Adults*—One or two tablets every 4 hours. *Children*—(Over 60 lb) one-half the adult dose.

Tedral SA: *Adults*—One tablet on arising and one tablet 12 hours later. Tablets should not be chewed. *Children*—Not established for children under 12.

Tedral Elixir: Note: One teaspoonful is equivalent to *one-quarter* Tedral tablet. *Children*—One teaspoonful per 30 lb body weight, every 4-6 hours, unless prescribed otherwise by physician. Should be given to children under 2 years of age only with extreme caution. *Adults*—One to two tablespoonfuls every four hours.

Supplied. Tedral: White, uncoated scored tablets in bottles of 24 (N 0047-0230-24), 100 (N 0047-0230-51) and 1000 (N 0047-0230-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0230-11).

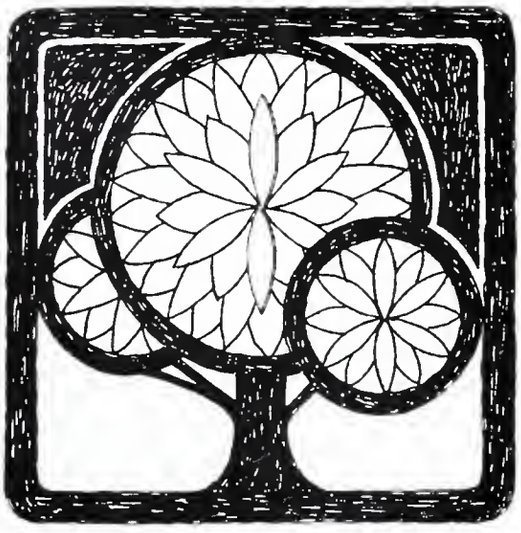
Tedral SA: Double-layered, uncoated, coral/mottled white tablets in bottles of 100 (N 0047-0231-51) and 1000 (N 0047-0231-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0231-11).

Tedral Elixir: Dark red and cherry-flavored in 474 ml (16 fl oz) bottles (N 0047-0242-16).

STORE BETWEEN 59° and 86°F (15° and 30°C).

Full information is available on request.

ART EXHIBIT



TEXAS MEDICAL ASSOCIATION
110th ANNUAL SESSION

10th ANNUAL PHYSICIANS' AND SPOUSES' ART EXHIBIT

MAY 12-13-14, 1977

SHAMROCK HILTON HOTEL

For information and applications write: Exhibit Manager
Texas Medical Association
1801 N. Lamar Blvd.
Austin, Texas 78701

News in brief

House of Delegates The Texas Medical Association House of Delegates will consider policies about national health insurance, cigarette smoking, midwifery, countersuits, and associate TMA memberships for hospitals and other health related institutions during Annual Session May 11-15 in Houston. The group will also elect new officers and consider recommendations concerning television violence, the 1490 Medicare claim form, and a program to deliver health care services in South Texas . . . 7

Organization The TMA Ad Hoc Committee to Study the Association's Organization Structure and Function began meetings in February. The group, appointed by the TMA Executive Board, will continue monthly meetings through September to study, analyze and evaluate a plan for improving the structure, function and operation of the Association . . . 8

Medical discipline The Texas State Board of Medical Examiners investigated 636 individuals from Sept 1, 1975, through Aug 31, 1976. There were nine cases filed with the State Board of Medical Examiners, and there were nine convictions by the board . . . 11

Physicians' incomes The average physician's income falls at about the midrange of corporation executive salaries, according to comparisons with a 1974 government study. The average physician netted $51,224 (after business expenses) from his practice in 1974, says the American Medical Association . . . 14

News in detail

House of Delegates will consider insurance, smoking, and midwifery in May

The Texas Medical Association House of Delegates will elect new officers, consider policies about national health insurance, cigarette smoking, midwifery, countersuits, and associate TMA memberships during TMA Annual Session May 11-15 in Houston.

New TMA officers will be elected, including the president-elect, vice president, secretary, treasurer, Speaker of the House of Delegates, Vice-Speaker of the House of Delegates, one trustee, seven delegates to the AMA, six alternates to the AMA, and one member-at-large of the Executive Board.

The Dallas County Medical Society has offered a resolution that the TMA designate smoking and nonsmoking sections at all official functions and conferences.

The TMA Committee on Cancer has offered an even broader proposal that asks physicians to acknowledge that cigarette smoking is a public health problem and urges all physicians to use their influence to eliminate cigarette smoking from all medical and health related facilities.

A proposal that the TMA provide a category of membership such as an associate membership for those interested hospitals and allied institutions in Texas has been proposed by the Bexar County Medical Society. The group says there is an increasing need for a close working relationship among physicians, hospitals, and allied facilities.

Several different proposals about national health insurance will be considered by the House of Delegates. One proposal urges the cessation of AMA support for all national health insurance proposals. Another group urges the AMA House of Delegates to issue a statement that the major reason for the AMA-sponsored national health insurance bill is a ploy to testify before public legislative committee hearings, and that the TMA agrees that national health insurance would not be in the best public interest.

A special committee is proposed to review actions where physician members are intent upon bringing a countersuit against plaintiffs and attorneys involved in unjustified malpractice suits.

Another proposal asks the AMA to work to delete Section 45 of HR 1818, legislation now being considered before the US Congress, creating a National Health Insurance Board with authority to restructure the health care delivery system.

The Harris County Medical Society proposes that the TMA join in a unified membership in the AMA because American medicine is being attacked from other sources and physicians as a group have only one main line of defense, the AMA.

Both the Midland County Medical Society and the TMA Committee on Maternal Health have proposed midwifery policy. The Midland group urges that TMA actively support and encourage the training and utilization of registered nurse midwife practitioners working under the supervision of physicians.

The TMA Committee on Maternal Health recommends that TMA take the position that lay midwifery will not deliver high quality maternity services, and that based on ongoing review of perinatal and maternal mortality and morbidity in Texas, labor and delivery should be managed in a hospital setting.

The Committee on Maternal Health and the Special Committee on Perinatal Health have asked the TMA to urge that each Health System Agency include in its activity an area-wide plan to improve maternal and child health, and that the TMA Committee on Maternal and Child Health be appointed to serve the Texas Department of Health Resources as a consultant in the coordination of these plans.

The House will also be asked to take a position on television violence. The TMA Council on Community Health Affairs asks TMA to view television violence as an environmental hazard affecting the health of American children and to support the Texas Congress of Parents and Teachers in its efforts to understand the implication of and respond constructively to the effect of television violence on children, their families, and their homes.

The Council on Tax-Financed Health Care Programs has asked the TMA to request the Texas delegation to the AMA to obtain the sup-

port of the AMA and other state medical associations to have the regulations and/or the law amended to permit a consulting physician to certify that he has rendered the service for which payment is being requested, and to receive such payment without having to obtain the patient's signature on the 1490 Medicare claim form for consultative services.

The Committee on Health Care of the Poor is proposing a program to deliver a full spectrum of health care services in South Texas. The Committee recommends that the TMA and the Texas Medical Foundation develop an organization of physicians, lay leaders, and health consumers that can accept funds from third parties and provide the health care services.

If a recommendation by the TMA Board of Councilors is approved, applications for TMA membership will be revised to add additional information. The added information includes indication of whether license has ever been suspended or revoked, indication of whether physician has ever been subject to disciplinary action by another state society and denied membership, and a statement authorizing hospitals, medical organizations, and licensing boards to release information pertaining to practice history. The Board recommends that a simplified application should be developed for student members.

Another recommendation provides that an ad hoc committee of the House of Delegates be appointed by the Speaker to define and clarify the order of authority to speak on behalf of the TMA during negotiation periods. The resolution also asks the ad hoc committee to advise the House on the extent and type of negotiation programs which should be undertaken.

A recommendation by the TMA Committee on Health Careers asks that physician's assistants as presently defined by TMA and the State Board of Medical Examiners' Rules and Regulations, be accepted as a suitable and worthwhile member of the health care team.

The Board of Councilors is asking the House to reaffirm the 1975 policy that separate, direct billing of the patient by the physician is the most acceptable and desirable arrangement for hospital-based physicians.

The House of Delegates will also receive an informational report from the TMA Task Force on Access to Health Care. The group will report on physician, community and medical school factors that influence a physician's choice of location.

The Task Force has also developed recommendations urging the TMA to define and implement public education processes designed to inform the public of factual aspects of access and improvement in medical care available, to publicize and explain the TMA Placement Bureau, and to establish workshops at the Annual Session to assist communities attempting to recruit physicians.

The House will convene at 8 am, Thursday, May 12, in the Chaparral Room of the Houston Marriott Hotel. The House will also meet Friday, May 13, and Saturday, May 14.

TMA members wishing to express their views on issues facing the House may speak to reference committees meeting at 10 am, Thursday, at the Marriott.

Special TMA committee considers Association organization and structure

The TMA Ad Hoc Committee to Study the Association's Organization Structure and Function, appointed by the TMA Executive Board, began meetings in February.

Members of the committee are Joseph T. Painter, MD, chairman, Charles Max Cole, MD, Sheridan S. Evans, MD, Ben R. Keller, Jr., MD, Sam N. Key, Jr., MD, A. Rex Kirkely, MD, and Travis Smith, MD.

The charge to the committee is to study, analyze, evaluate and submit a plan for improving the structure, function and operation of the Association including fiscal management; to analyze and submit recommendations defining appropriate Association relationships with other organizations, especially TIMA, TMF, and specialty societies; and to develop a mechanism for continuing long range planning for programs, resources, and management. The committee will submit periodic progress reports and recommendations to the Executive Board.

The final report will be presented to the Executive Board in September.

The Committee met Feb 27 and March 12 and 13 at the DFW Airport Marina Hotel. The Committee will meet again April 16 at the DFW Airport Marina Hotel to discuss the structure of the Association.

Future meetings will be May 15 in Houston and June 4, 5 in Austin.

TEXAS MEDICAL ASSOCIATION

INSURANCE PROGRAM

- DISABILITY INCOME
- OFFICE OVERHEAD
- MAJOR MEDICAL
- PERSONAL ACCIDENT
- LIFE INSURANCE

administered by

TEXAS MEDICAL ASSOCIATION INSURANCE TRUST

1901 N. Lamar Blvd., Austin, TX 78705, (512) 476-6551

Prudential
Group Insurance

TMA president L.S. Thompson, MD, will provide a report and commentary about the committee in his outgoing address to the House of Delegates at the May Annual Session, and the Executive Board report to the May House of Delegates meeting will summarize committee activities.

Further news about the committee's activities and recommendations will be included in *Texas Medicine*.

Center for Disease Control reports 685 cases of Guillain-Barre syndrome

Fifty states, the District of Columbia, and one United States territory have reported a total of 685 cases of Guillain-Barre syndrome to the Center for Disease Control in the period from Oct 1, 1976 through Feb 3, 1977, reports *Morbidity and Mortality Weekly Report*.

There have been 354 cases in influenza vaccine recipients (12 of whom received a non-A/New Jersey influenza vaccine) and 314 cases in non-recipients.

Seven additional patients received vaccine after their onset of Guillain-Barre syndrome. The vaccine status for ten cases is unknown.

Eighteen states have reported a total of 28 deaths for an overall case 4% fatality ratio. Fourteen of these were in influenza vaccine recipients and 13 in persons with no history of vaccination. In one case vaccination status is unknown.

The highest attack rates observed were during weeks two through four after vaccination.

Guillain-Barré syndrome attack rate by 1-week periods after vaccination, 22 States, Oct 6-Dec 21, 1976*

Week — Period After Vaccination	Vaccinated Cases	Attack Rate**
1	15	.94
2	32	2.09
3	45	3.12
4	19	1.54
5	8	.74
6	3	.35
7	3	.46
8	1	.21
9	1	.37

*Alabama, Arizona, Colorado, Delaware, Florida, Georgia, Hawaii, Idaho, Kansas, Maryland, Missouri, Nebraska, New Jersey, New Mexico, Ohio, Oklahoma, Oregon, Rhode Island, South Dakota, Utah, Michigan, Wyoming

**Attack rate in cases per million person-weeks of risk

The attack rates of Guillain-Barre syndrome are for recipients of vaccine containing either A/New Jersey alone or A/New Jersey and A/Victoria components; these recipients were from the 22 states from which adequate vaccine history and vaccine distribution data are available. The rates do not include the eight Guillain-Barre syndrome patients who received B/Hong Kong vaccine alone.

Adequate vaccine distribution figures are not available for the influenza B vaccine, however, the possibility of an association between influenza B vaccine and Guillain-Barre syndrome exists and should be known both to individuals to be immunized and physicians.

Supplies needed to aid Romanian earthquake victims

Special programs to aid the Romanian earthquake victims are being organized by the Permanent Mission of the Socialist Republic of Romania to the United Nations in New York.

A special account has been opened by The Romanian Bank for Foreign Trade, Account 1000, for assistance to the victims. All financial contributions to the account will be welcome, according to Romanian authorities.

For other information the following organizations may be contacted: Romanian Embassy, Washington D.C., 202-232-4747; Romanian Mission to the United Nations in New York, 212-682-3273; Romanian Trade Office in New York, 212-682-9120; Romanian Library in New York, 212-687-0180; and the Romanian National Tourist Office in New York, 212-354-1368.

An extensive list of medical supplies is needed for the earthquake victims. The list of medical equipment includes cardiac monitors, cardiac defibrillators, electrocardiographs, respirators, neurosurgical equipment, incubators, centrifuges, and other supplies.

The list of drugs and pharmaceuticals includes integrated milk powder and dietetic milk, baby food, analgesics, antiseptics, antibiotics, anticoagulents, cardiovascular preparations, plasma fractions, cotton work dressings, and gauze rolls and pads.

State Board of Medical Examiners investigates 636 individuals

The Texas State Board of Medical Examiners investigated 636 individuals from Sept 1, 1975 through Aug 31, 1976.

The board received complaints about physicians use of alcohol and drugs, unprofessional conduct, penal code violation in medical practice, failure to keep drug records, prescribing or dispensing to a habitual user, and writing false prescriptions.

Other complaints included the non-therapeutic treatment or prescribing, altering medical licenses, and overcharging by a doctor.

Thirty-four complaints were referred by the board to other agencies.

There were nine cases filed with the State Board of Medical Examiners, and there were nine convictions by the board.

Those convictions were in cases where physicians allowed another to use the medical license to practice medicine in Texas, aided and abetted the practice of medicine by a person not duly licensed to practice medicine by the Texas State Board of Medical Examiners, were convicted of the crime of the grade of a felony o: one which involves moral turpitude, and prescription of a drug which is non-therapeutic in nature or non-therapeutic in the manner such drug or treatment is administered or prescribed.

Those convictions resulted in different punishment including ten years probation of the medical license, indefinite suspension of the medical license to be followed by ten years probation of the license, and cancellation of the medical license.

The board also issued 42 reprimands. The board instituted a procedure of Letter of Invitation in 1974. A case filed is evaluated by the Secretary, Investigator in Charge and attorneys for the Board. If the alleged violation is present but not substantial evidence for a board hearing, it is handled by a letter inviting the physician to the board office to discuss the problem.

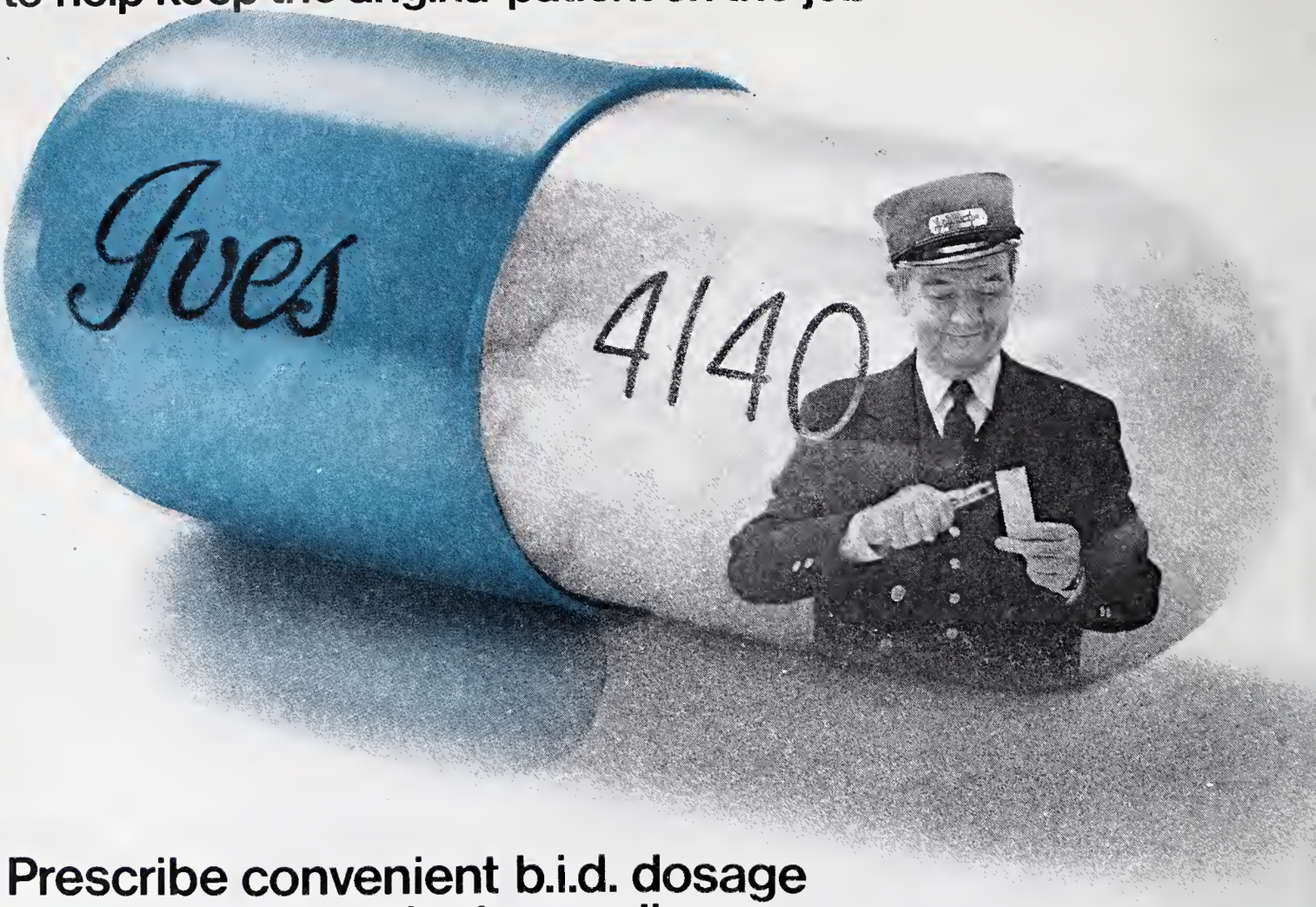
The board also issued 25 minor warnings for violations including not working under name under which licensed, allowing an employee to dispense medication or sign prescriptions, and use of a rubber stamp for signature on prescriptions. Two nurses were warned about possible practice of medicine without a license and a physician's assistant was warned about possible violation of board rules on physician's assistants.

TEXAS STATE BOARD OF MEDICAL EXAMINERS
Sept 1, 1975 - Aug 8, 1976

Complaints	657*
Investigations made	1283**
Individuals investigated	636
Cases filed in court	44
Cases filed with Board	9
Convictions by courts	15
Convictions by Board	9
Injunctions obtained	1
Reprimands	42
Cases Board dismissed	0
Court cases lost or dismissed	7

*Individual alleged violations by physicians, physician groups or unlicensed persons.
**Several of the investigations were worked on in more than one month and were reported each month as an investigation made. The investigations involved 636 separate individuals or firms.

to help keep the angina* patient on the job



Prescribe convenient b.i.d. dosage to encourage patient compliance

ISORDIL® TEMBIDS® CAPSULES
(isosorbide dinitrate)

SUSTAINED ACTION CAPSULES, 40 mg

- designed specifically to provide 8 to 10 hours of sustained prophylaxis against angina pectoris attacks
- b.i.d. dosage is frequently satisfactory to prevent angina attacks... dosage range: 1 capsule b.i.d. to q.i.d.
- stable... retains potency without significant loss or variation

*__Indications:__ Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:
"Possibly" effective: When taken by the oral route, Isordil is indicated for the relief of angina pectoris (pain of coronary artery disease). It is not intended to abort the acute anginal episode, but is widely regarded as useful in the prophylactic treatment of angina pectoris.
Final classification of the less-than-effective indications requires further investigation.

__Contraindication:__ Idiosyncrasy to this drug.

__Warnings:__ Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

__Precautions:__ Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.

__Adverse Reactions:__ Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

__Dosage:__ Every 6 to 12 hours according to need.
Consult direction circular before prescribing.

May we send you reprints, detailed information and/or professional samples?

TEMBIDS®—TRADEMARK FOR SUSTAINED ACTION CAPSULES

IVES LABORATORIES INC.
New York, N.Y. 10017

DEDICATED TO IMPROVING THE QUALITY OF LIFE THROUGH MEDICINE®

Carter administration will cap hospital charges

A federal cap on all hospital charges involving private patients and federal beneficiaries will be proposed by the Carter administration to curb cost escalation.

The plan will be developed with consultation with the American Hospital Association, the American Medical Association, the Blue Cross Association, and other interested organizations, said HEW Secretary Joseph Califano.

Califano said the intent is to keep hospital charges from increasing at more than a specified percentage figure annually. He said 9% would be a ball park figure and that the legislative proposal will call for consultation with outside groups in a formal manner involving regulations before the details of the plan and the amount of the ceiling are decided.

Asked why physicians' fees are not included in the proposal, the HEW secretary said he is taking one step at a time and that the Carter Administration will be considering that question.

A 9% cap could save $829 million in Medicare-Medicaid costs next fiscal year, Califano said, and over all, hospital costs increases would be reduced by $3 billion.

Carter said the admistration would begin moving on national health insurance before the end of 1977, but it would come in several stages.

Forty-seven rabies cases confirmed in Laredo

Forty-seven laboratory-confirmed cases of rabies in dogs beginning Nov 26, 1976, have been recorded in Laredo by zoonosis control workers, reports the Texas Department of Health Resources.

Human exposures in this outbreak have resulted in 38 persons undergoing the post-exposure Pasteur treatment.

Rabies in dogs does not follow a classic symptomatology in all cases. Several well-trained veterinarians, who are alert to the disease, have been exposed because of the clinical irregularities of the cases.

Texas is an enzootic focus for rabies; no area of the state is free of the disease, the health department said.

The Texas Department of Health Resources urges the total medical community to insist upon and support animal control laws that require annual rabies vaccination of domestic animals (dogs and cats) and the removal of strays.

Hospital mortality manual available

In-hospital death rates and length of stay norms for a nationwide sample of more than 29 million patients are now available for use in *Hospital Mortality, PAS Hospitals, United States, 1974-75,* a publication of the Commission on Professional and Hospital Activities.

The book is based on data from almost 2,000 short-term, nonfederal hospitals participating in the Professional Activity Study.

In the national sample 20% of all heart attack patients died, half of them within three days; 75% of all lung cancer patients were men; more than 11% of all preterm newborns died, half of them within one day; and women accounted for 42% of all deaths among heart attack patients.

The Commission on Professional and Hospital Activities is an international research and education center dedicated to the improvement of hospital and medical care.

The publication is available from CPHA, 1968 Green Road, Ann Arbor, MI 48103 for $12 per copy.

TMA hotline provides legislative news update

The Texas Medical Association news hotline provides a two minute recording on legislative issues and other medical news.

The hotline is a toll-free number, 1-800-252-9231, available 24 hours. Information is updated frequently.

The hotline will be continued through the end of the 65th session of the Texas Legislature. It is sponsored jointly by TMA's Council on Medical Legislation and Council on Communication. The legislative news is prepared by the TMA staff.

Physician incomes similar to executive salaries

How do physicians' incomes compare with those of non-medical professionals?

Comparison with a 1974 government study indicates that the average physician's income falls at about the midrange of corporate executive salaries. The comparison is not exact, however, says the American Medical Association.

The average physician netted $51,224 (after business expenses) from his practice in 1974, according to the American Medical Association. The gross receipts totaled $86,575 and the business expenses totaled $35,351. (These are the AMA's latest estimates.)

According to the *Statistical Abstract of the U.S.* (1976 edition), median net earnings for a physician under age 65 in 1974 was $44,580 and median net earnings for physicians (all ages) in incorporated practices was $61,500. Source of the *Statistical Abstract's* information was *Medical Economics*.

In 1974, the U.S. Civil Service Commission surveyed the salaries of eight non-medical professional occupations at the middle-management and executive levels of 144 American companies. Corporate officers were generally not included in the government survey.

The average physicians' net income is generally greater than the average salaries of the eight non-medical professions.

Salaries among these eight professions varied, however, according to the individual's level

AVERAGE ANNUAL EARNINGS OF PHYSICIANS AND NON-MEDICAL PROFESSIONALS, 1974

	Manufacturing	Non-manufacturing
Physicians*	—	$51,224
Directors of Personnel	$38,476	33,941
Attorneys	35,319	36,510
Chief Accountants	32,665	32,970
Engineers	33,500	32,903
EDP Program Managers	34,102	37,039
Plant Managers	32,892	41,655
Commercial Managers	25,987	32,100
Economists	39,657	33,943
AVERAGE, non-medical professions	$34,055	$33,515

*AMA estimate

Source: "Study of Private Enterprise Pay Rates for Positions Equivalent to GS-14/18," U.S. Civil Service Commission, June 1974.

of responsibility within the corporate structure.

The comparison is far from exact, however. The reason is that employees of most American companies receive certain fringe benefits such as health and life insurance in addition to their wages. Personnel people report that companies tend to pay out about 30 to 35 cents in fringes for every dollar of payroll.

Physicians, on the other hand, are typically self-employed individuals and, as such, do not receive most fringes in addition to their earnings. Rather, they must purchase most such benefits from their after-business expense earnings. An exception is the Keogh-type retirement plan in which the physician's contribution is tax-deductible.

How have incomes, both corporate and physician, changed since 1974? Precise figures are not available. However, a survey of executive pay in some 300 companies, conducted for the Commission on Executive, Legislative and Judicial Salaries, indicated an average salary increase of 6.2% per year during 1969-1976. Among companies where no bonuses were paid, executive salaries rose by 6.8% a year.

An analysis by the AMA of the physicians' fee index of the Consumer Price Index indicated that physicians' net income per patient visit rose by about 6.5% a year during 1971-1975.

Thus, it appears likely, assuming no major change in physicians' patient loads, that physician net incomes hold about the same relative position today, compared with other non-medical professional salaries, as they held in 1974.

AVERAGE ANNUAL EARNINGS OF PHYSICIANS AND NON-MEDICAL PROFESSIONALS, BY LEVEL OF CORPORATE RESPONSIBILITY, 1974

	Manufacturing	Non-manufacturing
Physicians*	—	$51,224
Executive Levels**		
B	$68,725	76,720
C	52,693	57,824
D	44,226	45,892
Middle Management Levels**		
E	35,490	36,797
F	29,224	28,013
AVERAGE, non-medical professions	$34,055	$33,515

*AMA estimate
**B is just at or below the level of corporate officer. The A level, corporate officer, was generally not included in the survey. D is the lowest executive level.

Source: "Study of Private Enterprise Pay Rates for Positions Equivalent to GS-14/18," U.S. Civil Service Commission, June 1974.

New criteria listed for brain death

Criteria for determining when the brain is truly dead, even though machines may be keeping the heart beating and the lungs breathing, are listed in the March 7 *Journal of the American Medical Association*.

The National Institute of Neurological and Communicative Disorders and Stroke sponsored a study in which 503 patients were examined in nine medical centers.

The study concluded that establishment of cerebral death requires:

1. All appropriate examinations and treatment procedures have been performed.

2. The brain is completely unresponsive, breathing without the machines has stopped, pupils are dilated, reflexes such as blinking are missing, and the electrocardiogram is silent for 30 minutes at least six hours after the stroke or accident.

3. If one of these standards is met imprecisely or cannot be tested, a comfirmatory test be made to demonstrate the absence of blood flow in the brain.

The third rule would allow the diagnosis of a dead brain to be made in patients with small amounts of sedative drugs in the blood, in patients undergoing treatment procedures that make examination of cranial nerves impossible, and in patients otherwise meeting the criteria but whose pupils are not dilated.

Project coordinator for the study was A. Earl Walker, MD, of the University of New Mexico School of Medicine, Albuquerque.

The state known as brain death came to the attention of physicians and the public some years ago when transplant surgery gained popularity. Viable organs were needed for transplant. If the pronouncement of death was delayed until the heart stopped beating, the organs underwent so much deterioration that a successful transplant was jeopardized, Dr. Walker points out.

Dr. Walker distinguishes between brain death and irreversible coma. Brain death means total destruction of the brain. Irreversible coma refers to a vegetating state in which all functions attributed to the brain are lost, but certain vital functions, such as respiration, temperature and blood pressure regulation may be retained.

Legal statutes in a number of states recognize brain death but not irreversible coma as a means of certifying death.

New guidelines offered for x-rays of breast

Recent publicity about potential dangers of mammography screening has generated an emotional reaction in both lay and professional circles.

The problem comes in the mass screening by x-ray of women who have no symptoms and are not in the high risk groups. The danger comes from the possibility that the x-ray itself may cause cancer.

American women and often their physicians as well are in a quandary over whether to use x-ray to check for cancer.

There still are some unknown factors in this situation, but, given the present state of medical knowledge, some practical guidelines for mammography are offered in the March 7 *Journal of the American Medical Association* by researchers from the Scripps Clinic and Research Foundation, LaJolla, California:

1. Any woman, regardless of age, with signs or symptoms that indicate breast cancer (such as a lump) should have a mammograph.

2. A woman who has a high risk for breast cancer (strong family history, previous breast cancer, no pregnancy before 30 years of age) should receive periodic screening examinations, including mammography.

3. Periodic screening should be done for all women over the age of 50 years.

4. Women under 50 years without symptoms should not be screened until further facts are discovered on the benefits and risks.

Harold M. Swartz, MD, and Barbara A. Reichling of the Scripps Clinic point out that "for any individual woman, the risk of inducing breast cancer by mammography is very low." Mammographs, they say, should be made only with modern equipment and techniques designed to provide optimum information with minimal dose.

20/150 H

20/100 EAR

20/70 ING IS

20/50 AS PRECIOUS

20/40 AS SIGHT HAV

20/30 YOU HAD YOUR HE

20/20 TESTED LATELY A SI

20/15 COMFORTABLE HEARING

20/10 INVESTMENT OF A FEW MIN

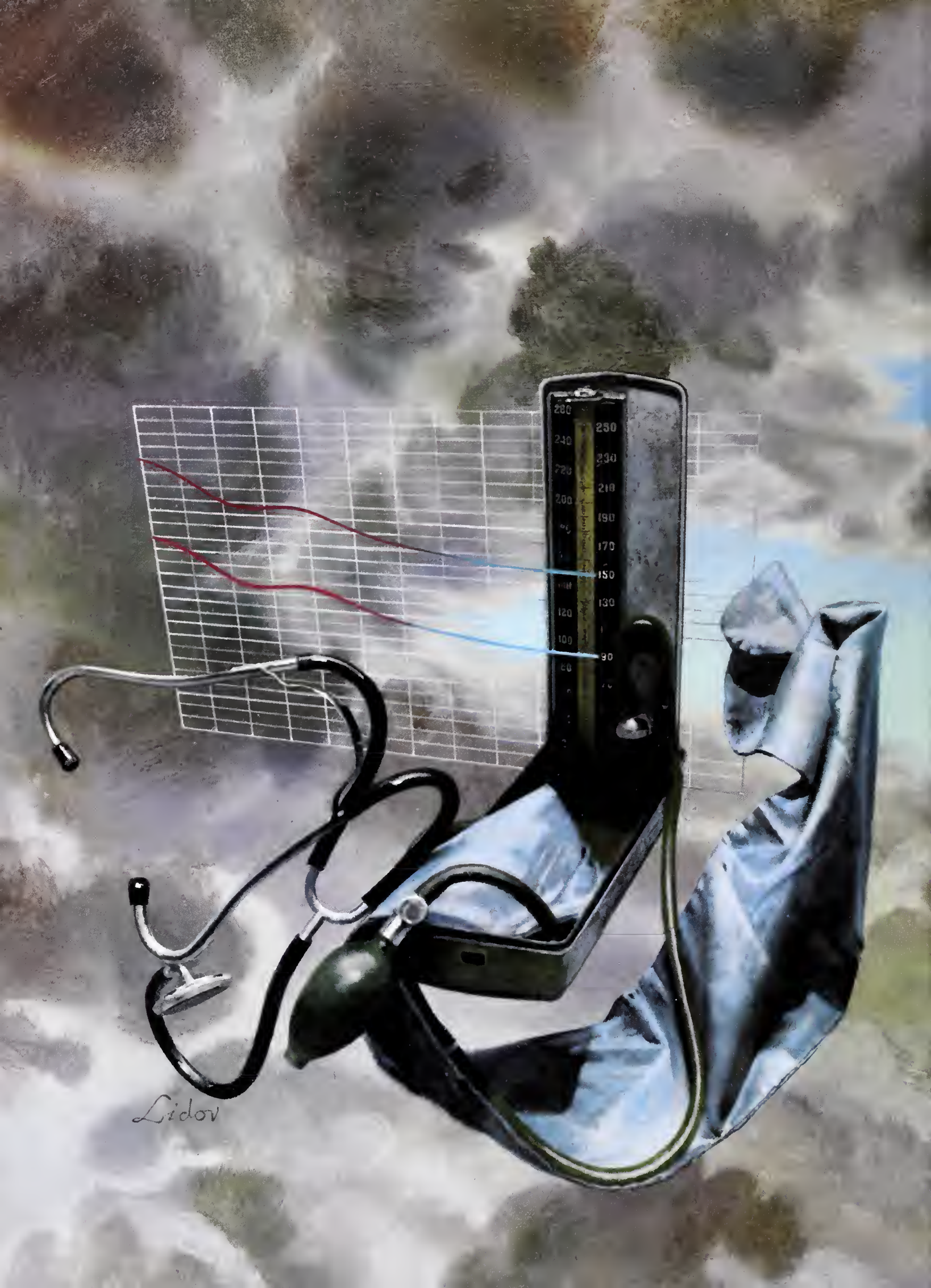
Hearing losses are among the most consistently neglected health problems. Many people with them won't even admit it to themselves, let alone others. A little encouragement may start them thinking about themselves more realistically.

That's why we're offering you the poster shown here. You can hang it on the wall or stand it on a small table. It comes with booklets called "As precious as sight" that give your patients some basic facts about auditory testing and hearing losses and how easy they are to correct in many cases.

Write to us for your free poster and booklets. They just might help you to help some patients who aren't hearing as well as they used to. Even those who ordinarily wouldn't hear of it.

Professional Relations Division, Beltone Electronics Corporation
4201 West Victoria Street, Chicago, Illinois 60646, an American company

Beltone
WHEN A HEARING AID WILL HELP


280
240
220
200
250
230
210
190
170
150
130
120
100
90
Lidov

When choosing a diuretic for day-in-day-out hypertension control with comfortable compliance...

The agent you choose in mild to moderate essential hypertension should offer (1) long-term effectiveness, (2) patient comfort and compliance.

Zaroxolyn offers both.

In one long-term study[1] Zaroxolyn brought moderately elevated (average 161/109 mm Hg) blood pressure down to the range of normotension—and held it there for a year or more.

The investigator noted, "Patient cooperation was surprisingly good for a study of such duration [2½ years]. The once-daily dosage schedule with metolazone [Zaroxolyn] no doubt contributed to patient compliance."

Overall compliance with Zaroxolyn is good—very good. An analysis of controlled clinical studies involving 188 Zaroxolyn patients showed that only eight discontinued therapy because of side effects. That's a discontinuation rate of only 4.3%, and broader clinical experience appears to substantiate this low rate[2]

Zaroxolyn. For long-term control and comfortable compliance in mild to moderate hypertension.

Recommended initial dosage in mild to moderate essential hypertension–2½ to 5 mg once daily

Zaroxolyn®

(metolazone, Pennwalt)

2½-mg, 5-mg and 10-mg tablets

once-daily antihypertensive diuretic

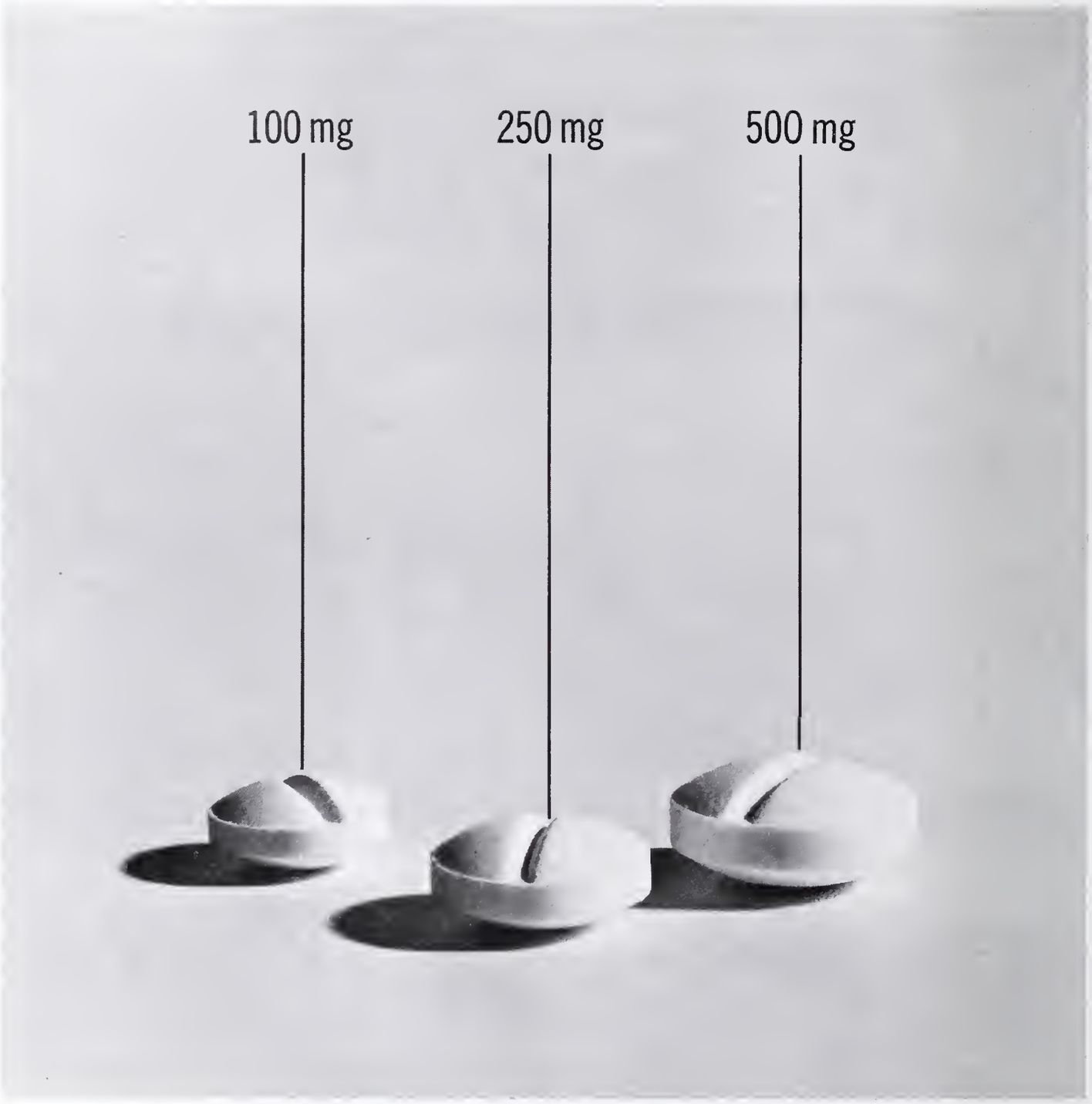
Before prescribing, see complete prescribing information in the package insert, or in PDR, or available from your Pennwalt representative. The following is a brief summary. **Indications:** Zaroxolyn (metolazone) is an antihypertensive diuretic indicated for the management of mild to moderate essential hypertension as sole therapeutic agent and in the more severe forms of hypertension in conjunction with other antihypertensive agents. Also, edema associated with heart failure and renal disease. **Contraindications:** Anuria, hepatic coma or precoma; allergy or sensitivity to Zaroxolyn. Or, as a routine in otherwise healthy pregnant women. **Warnings:** In theory cross-allergy may occur in patients allergic to sulfonamide-derived drugs, thiazides or quinethazone. Hypokalemia may occur, and is a particular hazard in digitalized patients; dangerous or fatal arrhythmias may occur. Azotemia and hyperuricemia may be noted or precipitated. Considerable potentiation may occur when given concurrently with furosemide. When used concurrently with other antihypertensives, the dosage of the other agents should be reduced. Use with potassium-sparing diuretics may cause potassium retention and hyperkalemia. Administration to women of childbearing age requires that potential benefits be weighed against possible hazards to the fetus. Zaroxolyn appears in the breast milk. Not for pediatric use. **Precautions:** Perform periodic examination of serum electrolytes, BUN, uric acid, and glucose. Observe patients for signs of fluid or electrolyte imbalance. These determinations are particularly important when there is excessive vomiting or diarrhea, or when parenteral fluids are administered. Patients treated with diuretics or corticosteroids are susceptible to potassium depletion. Caution should be observed when administering to patients with gout or hyperuricemia or those with severely impaired renal function. Hyperglycemia and glycosuria may occur in latent diabetes. Chloride deficit and hypochloremic alkalosis may occur. Orthostatic hypotension may occur. Dilutional hyponatremia may occur in edematous patients in hot weather. **Adverse Reactions:** Constipation, nausea, vomiting, anorexia, diarrhea, bloating, epigastric distress, intrahepatic cholestatic jaundice, hepatitis, syncope, dizziness, drowsiness, vertigo, headache, orthostatic hypotension, excessive volume depletion, hemoconcentration, venous thrombosis, palpitation, chest pain, leukopenia, urticaria, other skin rashes, dryness of mouth, hypokalemia, hyponatremia, hypochloremia, hypochloremic alkalosis, hyperuricemia, hyperglycemia, glycosuria, raised BUN or creatinine, fatigue, muscle cramps or spasm, weakness, restlessness, chills, and acute gouty attacks. **Usual Initial Once-Daily Dosages:** mild to moderate essential hypertension—2½ to 5 mg; edema of cardiac failure—5 to 10 mg; edema of renal disease—5 to 20 mg. Dosage adjustment may be necessary during the course of therapy. **How Supplied:** Tablets, 2½, 5 and 10 mg.

References:

1. Dornfeld L, Kane R. Metolazone in essential hypertension. The long-term clinical efficacy of a new diuretic. *Curr Ther Res* **18:** 527-533, 1975.
2. Data on file, Medical Department, Pennwalt Prescription Products

PENNWALT

Pennwalt Prescription Products
Pharmaceutical Division
Pennwalt Corporation
Rochester New York 14603



Tolinase®
tolazamide, Upjohn

Please contact your Upjohn representative for additional product information.

Upjohn

J-5695-6

©1977 THE UPJOHN COMPANY

Brief Summary of Prescribing Information

Actions: Pyrvinium pamoate appears to exert its anthelmintic effect by preventing the parasite from using exogenous carbohydrates. The parasite's endogenous reserves are depleted, and it dies. Povan is not appreciably absorbed from the gastrointestinal tract.

Indication: Povan is indicated for the treatment of enterobiasis.

Warnings: No animal or human reproduction studies have been performed. Therefore, the use of this drug during pregnancy requires that the potential benefits be weighed against its possible hazards to the mother and fetus.

Precautions: To forestall undue concern and help avoid accidental staining, patients and parents should be advised of the staining properties of Povan. Care should be exercised not to spill the suspension because it will stain most materials. Tablets should be swallowed whole to avoid staining of teeth. Parents and patients should be informed that pyrvinium pamoate will color the stool a bright red. This is not harmful to the patient. If emesis occurs, the vomitus will probably be colored red and will stain most materials.

Adverse Reactions: Nausea, vomiting, cramping, diarrhea, and hypersensitivity reactions (photosensitization and other allergic reactions) have been reported. The gastrointestinal reactions occur more often in older children and adults who have received large doses. Emesis is more frequently seen with Povan Suspension than with Povan Filmseals.

How Supplied: Each Povan Filmseal® contains pyrvinium pamoate equivalent to 50 mg pyrvinium, supplied in bottles of 50 (NDC 0710-0747-50; NSN 6505-00-134-1966). Povan Suspension, a pleasant-tasting, strawberry-flavored preparation containing pyrvinium pamoate equivalent to 10 mg pyrvinium per milliliter, is supplied in 2-oz bottles (NDC 0071-1254-31; NSN 6505-00-890-1093).

RC/RD PD-JA-1699-2-P (8-76)

Parke, Davis & Company
Detroit, Michigan 48232

When it's pinworms, treat the family

Povan® (pyrvinium pamoate)

- over 17 years of proved clinical effectiveness and safety
- no measurable absorption from the GI tract—minimal systemic side effects
- one dose—one time—that's all that's usually required
- two dosage forms: Tablets and Suspension—suitable for the entire family

Povan—there's a form for every member of the family.

PARKE-DAVIS

Federal funding termination postponed at Arkansas hospital

A cut off of federal funding at Newport Hospital and Clinic, Inc., Newport, Ark, has been postponed, according to the Department of Health, Education, and Welfare.

The Bureau of Health Insurance has postponed the effective date of the termination pending further review of the case, after the hospital's filing of a petition for reconsideration.

The hospital will continue to be eligible for participation in federal Medicare, Medicaid and Child Health benefits until further notice.

The HEW had previously announced the termination of federal benefits at the hospital March 3, 1977.

The previous decision to stop federal payments was based upon the hospital's 1975 conviction on two counts of conspiracy to defraud the Medicare program.

Hemophilia center opens in San Antonio

The University of Texas Health Science Center at San Antonio has established the South Texas Comprehensive Hemophilia Center in the Outpatient Clinic building of Santa Rosa Medical Center.

The first year grant is $237,000, for the one of 17 centers throughout the United States funded by the Department of Health, Education, and Welfare.

The Center is to provide information and consultation to physicians caring for patients with hemophilia and related disorders, and to determine the incidence and morbidity of these conditions in the South Texas area.

Physicians may call 512-228-2191 for information and consultation arrangements.

Texas doctors are target of marketing effort, IRS warns

The Internal Revenue Service has learned that the medical and dental professionals of Texas are targets of a marketing effort for Living Trusts or Family Trusts.

ABC Trust and Equity Trust are other names these plans have been marketed under.

Several of the tax advantages outlined in the trusts are contrary to the position held by the Internal Revenue Service.

The pitch usually goes: "For $2500 investment now, you save on taxes for years to come. But, if you need your CPA to make your decision for you, this is not for you. The man who can make up his own mind should buy a living trust."

For more information contact the Department of the Treasury, Internal Revenue Service, 1100 Commerce St., Dallas, Texas, 75242.

Coordinating Board denies TWU medical school proposal

The Coordinating Board, Texas College and University System has denied a request by Texas Woman's University at Denton to develop a new school of medicine.

The TWU proposal was to establish a medical school in the Rio Grande Valley to emphasize family practice and rural practice and to give special attention to medical problems of women and minority groups.

TWU estimated the initial cost would be $20 million.

TWU proponents said that the school would help solve the problem of inadequate health care delivery in rural areas.

However, Kenneth Ashworth, PhD, Commissioner of Higher Education, recommended that the Coordinating Board deny the request. Ashworth recommended that the state fully develop its existing medical schools.

The Program Development Committee of the Coordinating Board also recommended that the request be denied.

Appearing before the committee was William F. Ross, MD, chairman of the TMA Council on Medical Education and Hospitals. Dr Ross recommended the full development of the states existing schools of medicine and expansion and development of primary care residencies before any new medical schools are created.

Physician's business costs outpacing fees, AMA says

Physicians' fees have been rising rapidly. But their fees have not been rising as rapidly as their business expenses. And physicians' incomes per patient visit have not risen as much as the cost of living.

Those conclusions are based on an analysis of physicians' fees for the years 1971-1975, by the American Medical Association.

During the first three years of that period, 1971-1974, physicians' fees rose substantially *less* rapidly than the overall cost of living, up about 5.1% a year for physicians' fees and 6.1% for the Consumer Price Index (all items). Then in 1975, physicians' fees went up by 12.3% while the CPI registered a 9.1% increase. In 1976, the annual average increases were: physicians' fees, 11.3%; CPI, 5.8%.

Why do physicians' fees rise as they do? To see why, it is helpful to divide physicians' fees (as measured by the CPI) into two main components—the portion that helps pay the wages of the doctor's staff, office rent, and other business expenses; and the portion the doctor pays himself.

During most of 1971-1974, increases in doctor fees were tightly curbed by government-imposed price controls. Doctors' business costs during that period went up about 18.5%, which was a faster climb than their fees, 16.3%.

Doctors' incomes per patient visit went up about 14.7% during that period, while the cost of living went up 21.8%. In effect, the purchasing power of physicians' earnings declined.

Price controls on physicians' fees were lifted in 1974. During the following year, 1975, physicians' business expenses (many of which could be anticipated at the beginning of the year) went up by 12.3%. The largest increase in doctors' business costs was malpractice insurance, which went up 84%.

It may be that many doctors simply increased their fees according to their business costs. Average increase in physicians' fees was the same as the increase in their business expenses, 12.3%. As a result, physicians' incomes

INDICES OF PHYSICIANS' FEES AND THE COST OF LIVING

(1971 = 100)

	1974	1975
Physicians' Fees	116.3	130.5
• Business expenses component	118.5	133.1
• Physicians' income component	114.7	128.8
Cost of Living (CPI, all items)	121.8	132.9

SOURCES:

1. Physicians' fees and cost of living from the Consumer Price Index.

2. Business expense component from HEW data in *Federal Register*, June 16, 1975 (page 25502) and September 8, 1976 (page 37838).

3. Income component estimated from the above-listed CPI and Federal Register data.

per patient visit rose at nearly the same rate as their fees, 12.2%.

In effect, physicians in 1975 allowed themselves a partial cost of living increase.

While it is believed that a large portion of the 1976 increase in physicians' fees was attributable to increases in malpractice insurance rates, analysis will not be possible until the appropriate data become available, concludes the American Medical Association.

Polls show confidence in American medicine

Is there a "crisis" in delivery of medical care in America?

Some critics of American medicine say there is. But patients express a high degree of satisfaction in virtually all polls.

In these studies—none sponsored by the AMA—a clear majority of people respond by saying that they are satisfied with their medical care, that they can find a doctor when they need one, that the costs aren't too burdensome, and that in general the American way of medical care—delivered in large part by the private physician in his office or to his patients in the hospital—works well. Below are excerpts from many studies done in the last six or seven years.

A survey by the Continental Illinois Bank of Chicago, focused not on depositors but on a probability sample of Chicago residents/suburban residents, found that 90% of households with at least one person employed had medical insurance. Respondents indicated overall satisfaction with the extent of employer coverages. Six out of ten said their medical insurance, disability insurance and pension benefits were "adequate." Fifteen per cent even thought the employers medical insurance was "more than enough."

A survey by Black Opinion Survey of Washington, DC, which did a series of ten scientifically conducted telephone surveys among Black Americans, found 70% express great satisfaction with their medical care, 25% expressed dissatisfaction, and 5% were undecided.

A Louis Harris study done for Congress in 1973 on our most serious national problems ranked inflation first, health care delivery 15th out of 16.

About 7 Americans in every 10 say they are "very satisfied" with their personal state of health, according to the University of Michigan's Institute for Social Research.

Roper Reports finds that nearly 9 in every 10 (86%) have a family doctor they can call upon. Better than 8 in 10 told Roper interviewers they are "very satisfied" or "fairly well satisfied" with both the quality and availability of their medical care. Although a majority believe medical costs are too high, 8 in 10 report they are "very satisfied" or "well satisfied" with the provisions they have for meeting their medical expenses. About 9 in 10 say they have some kind of health insurance.

The US Office of Consumer Affairs' tabulation of consumer complaints ranks medically-related complaints lowest on a list of 20 categories, accounting for about 1 per cent of all consumer complaints. Automobile and home repairs head the list.

The Harris Poll respondents ranked medicine's leadership the highest among 16 different professions and institutions. About 7 in 10 say that leaders in medicine "really know what the people want," while only 2 in 10 believe medical leadership is "out of touch."

Chilton Research Services found doctors at the head of the list of occupations according to trustworthiness. On a scale of 1 to 10, Chilton's respondents gave doctors a score of 8.2.

A telephone survey by Citicorp, parent company of New York's First National City Bank, found that three out of four in a nationwide sample said the care they get is good to excellent; only a fifth said it was fair or poor.

A study (about 1973) by the Bureau of Social Science Research, Inc of the Washington, DC, metropolitan area shows that six of every seven local residents are at least "pretty satisfied" with their medical care and only one in 10 expresses any measurement of discontent. The

The Law of Medical Malpractice in Texas

A Primer for the Medical Community

By Alan K. Laufman

The author of this unique primer has sifted and analyzed Texas law and presents the pertinent facts in a convenient format free of legal jargon. *The Law of Medical Malpractice in Texas* offers the physician clear guidelines for avoiding malpractice suits and covers topics including:

The informed consent doctrine
Medical negligence
The "Good Samaritan" law
The treatment of minors
Giving medical advice by telephone
Boundaries of the patient-physician relationship

"[Laufman's] is a remarkably well-conceived and well done monograph. It is written by a medical student for the entire medical community. Why did I not have a book like this when I was in medical school?"—from the Foreword by Charles S. Petty, M.D.
Professor, University of Texas Southwestern Medical School at Dallas; Chief Medical Examiner, Dallas County

". . . fills a need that is not satisfied by any other book or manuscript that I have seen in this area. Written primarily for doctors, this book is accurate without becoming too technical."—Page Keeton
Dean Emeritus, University of Texas School of Law; Chairman, State Medical Professional Liability Study Commission

136 pages, $10.00

University of Texas Press
Box 7819
Austin 78712

study was commissioned by and published in the *Washington Post*.

Life Magazine in 1972 found that 68% of respondents to a request for write-in cards rated medical treatment for themselves and their family as good to excellent, and only 7% said their treatment was poor. Seventy per cent said their doctor seems to care about them individually, either "cares a lot" or "cares some," but 30% felt their doctor was "just doing a job" or was "indifferent."

Dr Max Parrott, then AMA president, in a speech in Chicago in 1976, offered a Consumer Health Satisfaction Index. Dr Parrott cited the polls, studies and surveys listed above as clear-cut evidence that the large majority of the American people are reasonably well satisfied with their medical care; that the American medical care system is working reasonably well; that the relatively few weak spots can be corrected without a major restructuring of the entire system. Medical care is available to most when they need it, and most are satisfied with the care they receive. Most have insurance and are not unduly apprehensive of being able to meet costs of care.

Said Dr Parrott: "We do not have in this country a universe of people wandering around fruitlessly in search of medical care. Quite the contrary. Two million eight hundred thousand doctor-patient consultations take place every day; 86% of the people say 'Yes, we have a family doctor we can call upon.' Six out of every ten Americans have seen his or her doctor at least once in the last six months; three quarters of Americans have seen their doctor within the last two years."

Texas Air Control Board appoints Medical Resources Advisory Panel

A new Medical Resources Advisory Panel will assist the Texas Air Control Board with health related aspects of air pollution control.

The nine-member panel of medical experts will advise the board and evaluate the significance of public exposure to each potentially toxic substance.

"As the control of traditional pollutants and sources in Texas becomes more routine, we need to focus more direct attention on the potential for adverse effects from exposure to very low levels of toxic materials emitted into the air," said Charles R. Barden, executive director of the Texas Air Control Board.

Members of the advisory panel are Patricia Buffler, MD, assistant professor of epidemiology, University of Texas Medical Branch, Galveston; Waldemar G. Johanson, MD, chief of pulmonary diseases, Audie Murphy Veterans Hospital, San Antonio; Warren J. Raymer, MD, Houston Allergy Clinic, Houston; Howard R. Wilcox, Jr, MD, director of Wilcox Laboratories, Beaumont; Don W. Micks, MD, professor and chairman, Department of Preventive Medicine & Community Health, University of Texas Medical Branch, Galveston; Charles Shaw, MD, acting director of Environmental Science Park, M.D. Anderson Hospital & Tumor Institute, Houston; Stanley M. Pier, PhD, associate professor of environmental health, University of Texas School of Public Health, Houston; Marcus M. Key, MD, professor of occupational medicine, University of Texas School of Public Health, Houston; and Marvin S. Legator, PhD, professor and director, Preventive Medicine & Community Health, University of Texas Medical Branch, Galveston.

"Only recently have the necessary knowledge and resources become available to permit detailed and specialized investigation of sources emitting materials not now subject to regulation but which may adversely affect public health," Barden said.

A study of potential toxic substances is already being conducted by the agency. The agency has been gathering data that will be compiled in a list of toxic substances arranged in a priority order on the basis of toxicity and population exposure potential.

Asbestos, vinyl chloride arsenic and lead will be included in the listing.

"The Medical Resources Advisory Panel will be used extensively to assist the board in reviewing priority lists of toxic substances and evaluating their significance to the public health," Barden said. Panel members will be called upon individually for expert advice, and occasionally will meet as a group to discuss highlights of the investigation and make recommendations.

Saving taxes is only one plus of leasing a Cadillac

The beneficial tax aspects regarding leasing by professionals in certain income brackets have been extensively publicized. You or your accountant can easily determine the degree of advantage with reference to your own situation. There are other important benefits:

- **You retain use of capital by avoiding a large down payment.**
- **You rid yourself of time-consuming involvement in auto buying and selling or trading.**
- **Leasing affords maximum flexibility in terms of time you wish to possess the car and financial arrangements.**
- **A strong, reputable dealer, as owner, can effect various benefits for you, as lessee.**

David Williams (713) 527-6635

BLAND-CURRAN
Cadillac CO.
DOWNTOWN HOUSTON
Bagby at Gray

The Nation's 2nd Largest Cadillac Dealership

CDC scientists isolate bacteria-like organism

The Center for Disease Control (CDC) said its scientists have isolated a bacteria-like organism that caused the outbreak of "Legionnaire's disease" last summer, but many elements of the six-month-old mystery remain unsolved, reports *American Medical News.*

The organism, which CDC calls bacteria for purposes of identification, was isolated from lung tissue of one of the 29 people killed by the disease. The discovery, scientists said, came during the routine process of checking for a rickettsia.

The organism, which has no name, apparently is not contagious, and has never before been associated with human illness. "You know whether a disease is contagious or not by whether or not it spreads among the patient's contacts," said Charles Shepard, MD, chief of the leprosy and rickettsia branch at CDC.

David Fraser, MD, an epidemiologist at CDC, said there had been no spread of the disease among people who came in contact with the nearly 200 people who contracted the disease. Most of the victims had attended a convention at Philadelphia's Bellevue-Stratford Hotel before becoming ill, and a CDC spokesman told Pennsylvania officials that the CDC plans to return to the hotel—now closed—to attempt to gather additional specimens.

Dr Fraser said that the organism could have been spread by air or water. He said research had shown that the risk of Legionnaire's disease was greater among those who smoked cigarettes, but also pointed out that this is common among respiratory infections.

Government investigators also said that the type of bacteria isolated in the Legionnaire's disease outbreak may be the same organism that caused a 1966 outbreak of pneumonia at St Elizabeth's Hospital in Washington, DC, killing eight patients. One theory expressed was that the bacteria might be a secondary infection associated with a virus, but officials said no virus had been discovered.

A CDC spokesman said investigators are still in preliminary stages of research on the organism, but that the intense public interest in the situation necessitated early release of the information.

Investment performance for TMA Members' Retirement Plan and Trust

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1977 Through 2/28	3 Years Ended 12/31/76	5 Years Ended 12/31/76	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	−10.3%	− 9.3%	− 8.3%	1.5%
Loomis-Sayles Mutual Fund	− 8.4%	− 1.6%	− 4.4%	3.4%
Mercantile Bank Equity Fund	− 7.9%	+ 5.9%	−17.8%	3.8%
Mercantile Bank Fixed Income Fund	− 2.2%	+ 0.2%	− 5.5%	7.5%
T Rowe Price Growth Stock Fund	−11.6%	− 2.6%	−16.6%	2.3%
T Rowe Price New Income Fund	− 2.2%	+ 2.7%	N/A	7.8%
Stein Roe & Farnham Balanced Fund	− 6.2%	− 0.5%	− 2.7%	3.3%
Standard & Poor 500 Stock Average	− 7.1%	+10.4%	+ 5.3%	
Dow Jones Industrial Average	− 6.8%	+18.1%	+12.9%	

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

AUSTIN: TEXAS DEPARTMENT OF HEALTH RESOURCES. Gov Dolph Briscoe has reappointed the following to the Board of the Texas Department of Health Resources to a term expiring Feb 1, 1983: Charles Max Cole, MD, Dallas; Roderic Bell, Dallas; H. Eugene Brown, DO, Lubbock; Francis A Conley, DDS, Austin; Raymond G. Garrett, DVM, Taylor; William J. Foran, Amarillo, vice chairman. Ben Durr, El Paso, was appointed to replace Bill Burton, El Paso, to a term to expire Feb 1, 1981. Ramiro R. Casso, MD, McAllen, was appointed to replace Sterling Fly, MD, Uvalde, to a term to expire Feb 1, 1981.

WASHINGTON: BUDGET OPTIONS FOR HEALTH. The Congressional Budget Office in its publication "Budget Options for Fiscal Year 1978" stated "the shape of the federal health policy in the next few years depends on how the Congress answers to interrelated questions. What can be done to hold down increases in costs, especially for care financed by the federal government, without impairing quality? What can be done to improve access to medical care for those who still have difficulty obtaining it and paying for it?" Answers to these questions will be influenced by Congressional action in three key health areas, Medicare and Medicaid reform, 1977 expiring health legislation, and national health insurance. According to the Congressional Budget Office, Medicare and Medicaid "account for 83% of federal health spending and have grown at a rate of 140% over the last five years."

WASHINGTON: HEALTH PLANNING LAW REGULATIONS. The Health Planning Law, its constitutionality already under challenge by organized medicine and two state governments, has become the subject of more argument. Two federal lawmakers have objected to regulations published by the Department of Health, Education, and Welfare. Sen Edward Kennedy (D-Mass), chairman of the Senate Labor Subcommittee on Health, and Rep Paul Rogers (D-Fla), chairman of the House Commerce Subcommittee on Health, urged HEW Secretary Joseph Califano to strengthen certificate of need requirements by covering organized ambulatory care programs, modernization of facilities, site acquisition, purchase of existing facilities, and use of leased space. The certificate of need issue is a main point of contention in the suit against the national planning law by the state of North Carolina, which has been joined by the AMA, the North Carolina Medical Society, and the state of Nebraska. The AMA charges that the law interferes with state government by requiring legislatures to enact certificate of need laws.

HAWAII: MALPRACTICE INSURANCE. Hawaii's Board of Medical Examiners said it probably won't act this year to revoke licenses of physicians who have violated the state's malpractice insurance law. The law requires MDs to have at least $100,000 in malpractice insurance or its equivalent in assets. Earlier this month, a judge rejected a Hawaii Medical Association bid for an injunction that would have blocked enforcement of the law.

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber, Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

WASHINGTON: HEALTH CARE SPENDING. The Department of Health Education and Welfare health spending has jumped from $9.7 billion in 1968 to a predicted $42.2 billion. It will rise another $3 billion next year, according to the Ford Administration's final budget proposal to Congress. President Carter's recommended changes in Ford's fiscal 1978 federal budget proposal include legislation to control price increases for medical care.

WASHINGTON: CERTIFICATE OF NEED CONTROLS. Certificate of need controls don't work as well as they are supposed to, according to an analysis prepared for HEW. Certificate of need controls "have contributed to cost inflation" indicates the study "Impact of State Certificate of Need Laws on Health Care Costs and Utilization." David S. Salkever of Johns Hopkins University and Thomas W. Bice of Washington University said their study indicated that certificate of need controls reduce the expansion in beds while increasing the expansion in plant assets per bed "and had no discernible negative effect on total investment. In other words, certificate of need controls altered the composition of investment but not its magnitude."

WASHINGTON: MEDICAL SCHOOL ACCREDITATION. "The Federal Trade Commission is out to undo the school accreditation responsibility of the Liaison Committee on Medical Education (LCME)," AMA President Richard E. Palmer, MD, said in a recent lecture before the Federation of State Medical Boards of the United States. He referred to a letter from the Federal Trade Commission to the US Office of Education asking that LCME's petition for continued acceptance as the accrediting agency for medical schools be denied. LCME is sponsored jointly by the AMA and the Association of American Medical Colleges. "Implicitly, this federal agency is out to destroy the credibility of the medical profession not only in setting medical education standards but in licensing physicians. These procedures would then become subject to federal regulation," he said.

SEATTLE: LAWYERS' PROFESSIONAL LIABILITY. The first report from the American Bar Association's recently established Special Committee on Lawyers' Professional Liability, made public at the group's midyear meeting in Seattle, cites the following as causes of the crisis in availability and affordability of lawyers' professional liability insurance: society has become more litigious, consumerism and increased media attention have educated the public to view a lawsuit as a normal rather than an extraordinary means, attitudes of the legal profession have changed about the propriety or profitability of bringing a malpractice suit against a fellow attorney, and the frequency and severity of malpractice claims have increased." The report states there is clear evidence that the frequency and severity of malpractice claims have increased significantly in the last six years.

AUSTIN: TEXAS BOARD OF PUBLIC WELFARE. Gov Dolph Briscoe has reappointed Raul Jiminez, San Antonio, to a six-year term on the Texas Board of Public Welfare to expire Jan 19, 1983.

WASHINGTON: HEALTH PLANNING LAW EXTENSION. A one-year extension of the Health Planning Law was approved by the House Commerce Health Subcommittee. Subcommittee Chairman Paul Rogers (D-Fla) said he intends to pass simple extensions for most of the federal health programs scheduled to expire this year. Full-scale review will be held next year. However, the subcommittee made some changes in its one-year extension of the Health Manpower Law, including a one-year delay in the requirement that foreign medical graduates pass equivalency examinations.

WASHINGTON: FOOD AND DRUG ADMINISTRATION. New Commissioner of the Food and Drug Administration is Donald Kennedy, PhD, the first non-physician to head the agency in 11 years. He is a neurophysiologist from Stanford University. He has been a senior consultant to the White House Office of Science and Technology. In announcing the appointment, HEW Secretary Joseph Califano said, "It is imperative that the FDA act only in the public interest and with much greater dispatch than it has in the recent past."

WASHINGTON: FEDERAL CAPITATION ASSISTANCE. Four medical schools have stated publicly they will refuse federal capitation assistance rather than be forced to accept US citizens from foreign medical schools. The four schools planning to oppose the forced-transfer provision of the new health manpower bills are Indiana University, Yale University, Stanford University, and Wright State University in Dayton, Ohio.

Does the sound of malpractice make you ill?

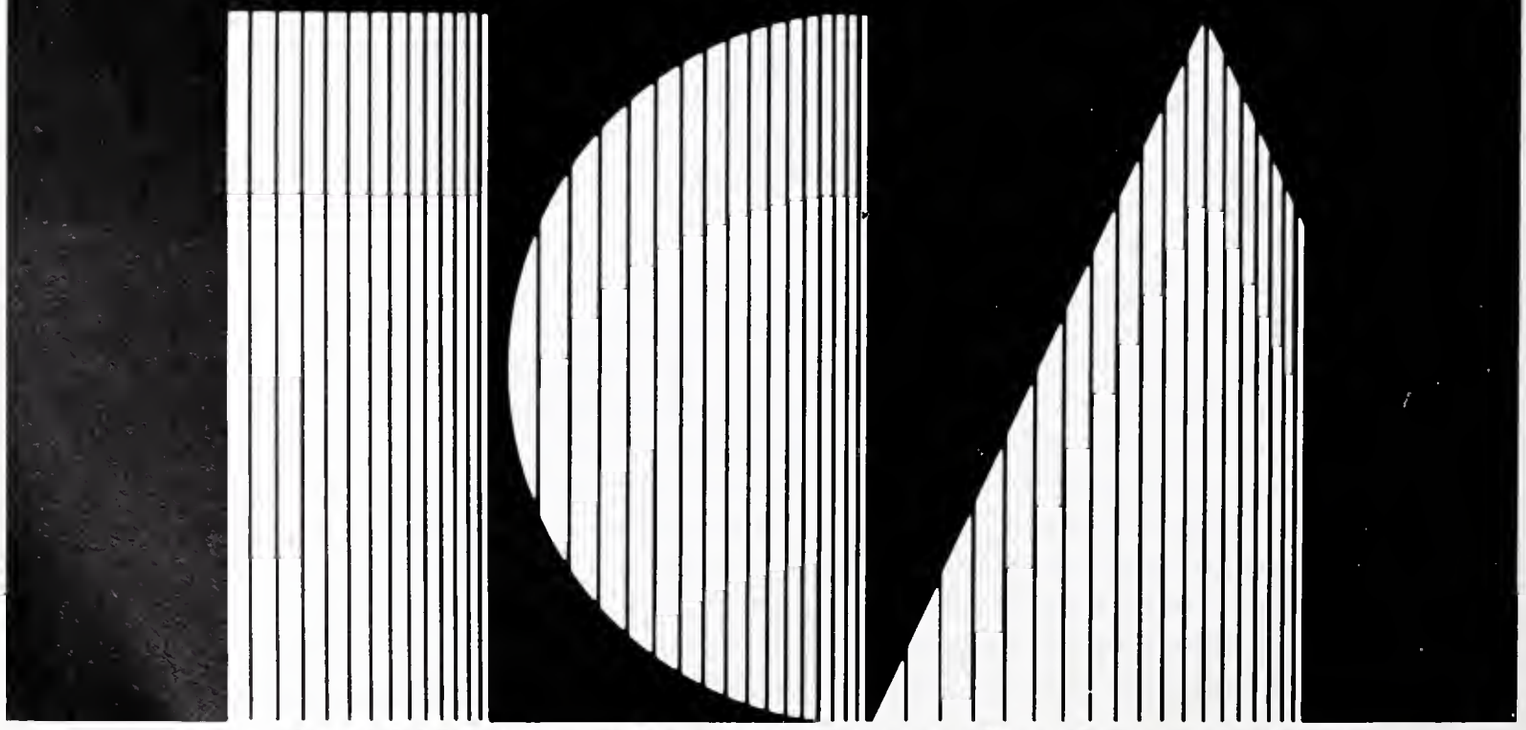
Improper insurance coverage for malpractice suits, or the burden of enormous insurance premiums can also cause financial illness.

And because of this very serious reality, Insurance Corporation of America, a multi-million dollar admitted asset carrier, now offers realistic coverage for the Texas physician and surgeon. This coverage includes vigorous defense against spurious claims and prevents needless out-of-court malpractice settlements.

ICA is made up of lawyers, doctors and insurance experts who understand your professional liability needs and have provided an answer. ICA offers only non-assessable, "occurrence" policies with your rate based on local, not national or even statewide experience.

There's more to learn about ICA, and protecting yourself from needless malpractice worries. Call our 24 hour number, 1-713-526-4863 for the name of the ICA agent nearest you.

We know your concern is practicing medicine, and our concern is protecting your practice.



A+AAAAA Reinsurance Protection — Government Excess Insurance Available.

MEETINGS

AMERICAN COLLEGE OF PHYSICIANS

The 58th Annual Session of the American College of Physicians will take place April 18-21, 1977, in Dallas. The Fairmont Hotel is headquarters for the meeting, and the majority of the scientific program will be at the Dallas Convention Center. Workshops, symposia and meet-the-professor sessions will deal with biologic membranes, duodenal ulcers, computerized axial tomography, psychiatry, and other subjects. The meeting also will feature guests' activities, a technical and scientific exhibition and a post-convention tour of Guatemala and Costa Rica.

Contact: 4200 Pine St, Philadelphia 19104.

ASSOCIATION FOR THE PSYCHOPHYSIOLOGICAL STUDY OF SLEEP

The Department of Psychiatry, Baylor College of Medicine, is hosting the annual meeting of the Association for the Psychophysiological Study of Sleep. The meeting takes place at the Shamrock Hilton Hotel, Houston, April 27-May 1, 1977. National and international experts on sleep and sleep disorders will conduct a variety of programs of interest and significance to scientists and practicing physicians.

Contact: Ismet Karacan, MD, Director of Sleep Disorder Center, Baylor College of Medicine, Houston 77030.

SOUTHWEST ALLERGY FORUM

Lakeway Inn, 20 miles northwest of Austin, Tex, is the site of the Southwest Allergy Forum, April 30-May 4, 1977. The Office of Continuing Medical Education, UT Health Science Center at San Antonio will co-sponsor the scientific program, which meets the criteria for 14 credit hours in Category 1 of the AMA Physician's Recognition Award. The registration fee is $35 per physician.

Contact: James B Carter, MD, Suite 107, Medical Park Tower, Austin, Tex 78705.

CURRENT MEETINGS IN TEXAS

NATIONAL CONFERENCE ON CHILD ABUSE AND NEGLECT, Rice Rittenhouse Hotel, Houston, Apr 17-20, 1977. Presented by National Center on Child Abuse and Neglect, Office of Child Development, Department of Health, Education, and Welfare, Washington, DC; Resource Center on Child Abuse and Neglect, Center for Social Work Research, School of Social Work, University of Texas at Austin. Topics to be addressed include changing family roles, violence in society, services to high-risk families, child placement, emotional involvement of helping persons, role of governments in relation to families, others. Advance registration fee, $50. Contact: National Conference, Resource Center on Child Abuse and Neglect, Center for Social Work Research, School of Social Work, University of Texas at Austin, Austin, Tex 78712.

TEXAS SCHOOL HEALTH ASSOCIATION, First Annual Convention, Houston Marriott, 2100 S Braeswood, Houston, Apr 1-3, 1977. Program includes mini workshops, luncheon, business meeting. Workshop topics: Baylor's independent study of risk factors in cardiovascular research, smoking education, VD Action Council, putting your heart into the curriculum, American Cancer Society school and college program, child health advocacy model, health education program for children with asthma, tattle tooth program, pattern for healthful living, today's nutrition. Speakers also to discuss school nurses, health educators, school physicians. Contact: 7954 Glenheath St, Houston 77061.

TEXAS SOCIETY OF CHILD PSYCHIATRY, La Mansion Motor Hotel, San Antonio, Tex, Apr 1-2, 1977. Dr Jacob Christ, professor of child psychiatry, New York, keynote speaker. Contact: Joe W King, MD, Sec, 4645 Samuell Blvd, Suite 203, Dallas 75228.

For other courses and symposiums, see Continuing Education Courses, pp 40-44.

APRIL

AMERICAN ACADEMY OF PEDIATRICS, New Orleans, Apr 16-20, 1977. Department of Communications, 1801 Hinman Ave, Evanston, Ill 60204.

AMERICAN ACADEMY OF NEUROLOGY, Atlanta, Apr 25-30, 1977. Stanley A Nelson, Exec Dir, 4015 W 65th, Suite 302A, Minneapolis 55435.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Toronto, Apr 18-20, 1977. WT Maloney, 6 Beacon St, Suite 620, Boston 02108.

AMERICAN COLLEGE HEALTH ASSOCIATION, Philadelphia, Apr 19-22, 1977. James W Dilley, Exec Dir, 2807 Central, Evanston, Ill 60201.

■ AMERICAN COLLEGE OF PHYSICIANS, Dallas, Apr 18-21, 1977. EC Rosenow, Exec Vice-pres, 4200 Pine St, Philadelphia 19104.

■ AMERICAN COLLEGE OF RADIOLOGY, Houston, Apr 17-22, 1977. WC Stronach, Exec Dir, 20 N Wacker Dr, Chicago 60606.

AMERICAN GERIATRICS SOCIETY, San Francisco, Apr 13-14, 1977. 10 Columbus Circle, New York 10019.

AMERICAN OCCUPATIONAL MEDICAL ASSOCIATION, Boston, Apr 24-28, 1977. Howard N Schulz, Exec Dir, 150 N Wacker Dr, Chicago 60606.

AMERICAN PEDIATRIC SOCIETY, San Francisco, Apr 25-29, 1977. David Goldring, MD, Sec, 500 S Kingshighway, St Louis 63110.

AMERICAN UROLOGICAL ASSOCIATION, INC, Chicago, Apr 24-28, 1977. Richard J Hannigan, Exec Officer, 1120 N Charles St, Baltimore 21201.

ARKANSAS MEDICAL SOCIETY, Little Rock, Apr 24-27, 1977. CC Long, MD, Exec Vice-pres, 214 N 12th, Box 1208, Fort Smith, Ark 72901.

■ ASSOCIATION FOR THE PSYCHOPHYSIOLOGICAL STUDY OF SLEEP, Houston, Apr 27-May 1, 1977. Ismet Karacan, MD, Director, Sleep Disorder Center, Baylor College of Medicine, Houston 77030.

■ CHILDREN'S HOSPITAL, SANTA ROSA MEDICAL CENTER, Location to be announced, Apr 30-May 1, 1977. Howard A Britton, Medical Director, Children's Hospital, Santa Rosa Medical Center, San Antonio, Tex 78285.

■ NATIONAL CONFERENCE ON CHILD ABUSE AND NEGLECT, Houston, Apr 17-20, 1977. National Conference, Resource Center on Child Abuse and Neglect, Center for Social Work Research, School of Social Work, The University of Texas at Austin, Austin, Tex 78712.

NATIONAL CONFERENCE ON HIGH BLOOD PRESSURE CONTROL, Washington, DC, Apr 13-15, 1977. Conference Headquarters, 1501 Wilson Blvd, Suite 600, Arlington, Va 22209.

SOCIETY OF TEACHERS OF FAMILY MEDICINE. New Orleans, Apr 17-20, 1977. Ms PL Plhak, Exec Dir, 1740 W 92nd St, Kansas City, Mo 64114.

SOUTHEASTERN SURGICAL CONGRESS, Bal Harbour, Fla, Apr 3-7, 1977. AH Letton, MD, Sec-Dir, 315 Boulevard NE, Suite 500, Atlanta 30312.

■ SOUTHWEST ALLERGY FORUM, Lakeway Inn, Austin, Tex, Apr 30-May 4, 1977. Theo S Painter, Jr, MD, Suite 107, Medical Park Tower, Austin, Tex 78705.

■ ST LUKE'S EPISCOPAL HOSPITAL/BAYLOR COLLEGE OF MEDICINE, 13th Annual Orthopedic Symposium, Houston, Apr 1-2, 1977. Alexander E Brodsky, MD, 505 Medical Towers Bldg, Houston 77025.

■ TEXAS SCHOOL HEALTH ASSOCIATION, Houston, Apr 1-3, 1977. 7954 Glenheath St, Houston 77061.

■ TEXAS SOCIETY OF CHILD PSYCHIATRY, San Antonio, Tex, Apr 1-2, 1977. Alberto C Serrano, MD, Pres, 2135 Babcock Rd, San Antonio, Tex 78229.

■ TEXAS STATE BOARD OF EXAMINERS IN THE BASIC SCIENCES, Locations to be announced, Apr 1-2, 1977. Exec Sec, 319 Sam Houston State Office Bldg, Austin, Tex 78701.

■ TEXAS SURGICAL SOCIETY, Galveston, Tex, April 1977. Robb H Rutledge, Sec, 901 S Lake St, Fort Worth, Tex 76104.

■ TEXAS UROLOGIC SOCIETY, Laredo, Tex, Apr 15-16, 1977. Carlos H Mata, MD, Sec-Treas, 1012 Santa Ursula, Laredo, Tex 78040.

■ TRAVIS CLINIC FOUNDATION, Jacksonville, Tex, April 1977. James H Pesnell, Box 870, Jacksonville, Tex 75766.

MAY

■ AMERICAN MEDICAL STUDENT ASSOCIATION-UT MEDICAL BRANCH NATIONAL STUDENT RESEARCH FORUM, Galveston, Tex, May 4-7, 1977. Room 209, Libbie Moody Thompson Basic Sciences Building, UT Medical Branch, Galveston, Tex 77550.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, San Antonio, Tex, May 19-22, 1977. Geraldine Midgley, Box 1287, Uvalde, Tex 78801.

ASSOCIATION FOR THE CARE OF CHILDEN IN HOSPITALS, Dearborn, Mich, May 25-28, 1977. Mary Frances Podolak, RN, Childrens Hospital of Michigan, 3901 Beaubien Blvd, Detroit, Mich 48201.

INDIANA CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, Indianapolis, May 11-14, 1977. David Gettle, MD, 10005 Hillsdale, Carmel, Ind 46032.

■ NORTH TEXAS CHAPTER, AMERICAN COLLEGE OF SURGEONS, Dallas, May 1977. Felix P Peppard, MD, FACS, Sec-Treas, 3600 Gaston, Dallas 75246.

SOCIETY OF TEACHERS OF FAMILY MEDICINE, Atlanta, May 2-4, 1977. 1740 W 92nd St, Kansas City, Mo 64114.

■ TEXAS AIR-MEDICS ASSOCIATION, Houston, May 12, 1977. CF Miller, MD, Box 1338, Waco, Tex 76703.

■ TEXAS DERMATOLOGICAL SOCIETY, Houston, May 14-15, 1977. William F Spiller, MD, Sec, 5000 Montrose, Houston 77006.

■ TEXAS DIABETES ASSOCIATION, Houston, May 13, 1977. Eric A Orzeck, MD, 7800 Fannin, Houston 77054.

■ **TEXAS MEDICAL ASSOCIATION, Annual Session, Houston, May 11-15, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.**

■ TEXAS OCCUPATIONAL MEDICAL ASSOCIATION, Houston, May 12, 1977. Frank J Kelly, MD, Box 647, Amarillo, Tex 79604.

■ TEXAS OPHTHALMOLOGICAL ASSOCIATION, Houston, May 1977. CA Struve, MD, Pres-elect, Box 6374, Corpus Christi, Tex 78411.

JUNE

AMERICAN MEDICAL ASSOCIATION, Annual Convention, San Francisco, Jun 18-23, 1977. James H Sammons, MD, Exec Vice-pres, 535 N Dearborn St, Chicago 60610.

INTERNATIONAL CONGRESS OF RHEUMATOLOGY, San Francisco, Jun 26-Jul 1, 1977. 9650 Rockville Pike, Bethesda, Md 20014.

NATIONAL FOUNDATION/MARCH OF DIMES, 1977 Birth Defects Conference, Memphis, Jun 8-10, 1977. Robert L Summitt, MD, Professor of Pediatrics, Anatomy and Child Development, University of Tennessee Center for the Health Sciences, 711 Jefferson, Memphis 38163.

ROCKY MOUNTAIN NEUROSURGICAL SOCIETY, INC, Lake Tahoe, Nev, Jun 8-12, 1977. Richard H Moiel, MD, Sec, 601 Medical Towers, 1709 Dryden St, Houston 77030.

■ **TEXAS HEART INSTITUTE, Houston, Jun 2-4, 1977. Mrs Verna Dewees, Sec to Medical Director, Box 20269, Houston 77025.**

JULY

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Mescalero, NM, Jul 18-21, 1977. Bob Reid, Convention Dir, Box 456, Sunland Park, NM 88063.

FLORIDA CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, 1977 Clinical Conference on Pre-Hospital Emergency Care, Orlando, Fla, Jul 8-10, 1977. Registrar, 600 Courtland St, Suite 420, Orlando, Fla 32804.

AUGUST

ASPEN MUSHROOM CONFERENCE, Aspen, Colo, Aug 7-12, 1977. Aspen Mushroom Conference, c/o Beth Israel Hospital, 1601 Lowell Blvd, Denver 80204.

INTERNATIONAL CONFERENCE ON MEDICAL COMPUTING, Toronto, Aug 8-13, 1977. Department of Computer Systems in Medicine, American Medical Association, 535 N Dearborn St, Chicago 60611.

SEPTEMBER

AMERICAN ASSOCIATION OF ELECTROMYOGRAPHY AND ELECTRODIAGNOSIS, Salt Lake City, Sep 30-Oct 1, 1977. JL Melvin, MD, Sec-Treas, 10437 W Watertown Plank Rd, Box 7372, Milwaukee 53226.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Hot Springs, Va, Sep 8-10, 1977. GW Mitchell, Jr, MD, Sec, 171 Harrison Ave, Boston 02111.

AMERICAN ASSOCIATION FOR THE SURGERY OF TRAUMA, Detroit, Sep 15-17, 1977. JA Boswick, Jr, MD, Admn Officer, University of Colorado, 4200 E Ninth Ave, Denver 80220.

AMERICAN CANCER SOCIETY, NATIONAL CANCER INSTITUTE, National Conference on the Lymphomas and the Leukemias, New York, Sep 29-Oct 1, 1977. Sidney L Arje, MD, 777 Third Ave, New York 10017.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Hartford, Conn, Sep 10-11, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Lake of the Ozarks, Mo, Sep 16-18, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Chicago, Sep 24-25, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Hot Springs, Va, Sep 30-Oct 2, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Seminar on Negotiations, Bloomington, Minn, Sep 10-12, 1977. Department of Negotiations, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, Sep 27-Oct 1, 1977. Ms L Sablack, Exec Sec, 5272 River Rd, Suite 290, Bethesda, Md 20014.

AMERICAN ROENTGEN RAY SOCIETY, Boston, Sep 27-30, 1977. JF Martin, MD, Sec, 300 S Hawthorne Rd, Winston-Salem, NC 27103.

■ AMERICAN SOCIETY OF OPHTHALMOLOGIC AND OTOLARYNGOLOGIC ALLERGY, Dallas, Sep 30-Oct 1, 1977. WA Ward, MD, Sec-Treas, Bowman Gray School of Medicine, Winston-Salem, NC 27103.

Has this face become more familiar to you than your golf partner's?

You may own a large piece of property as an investment. But time and experience prevent you from looking after that investment properly. For 16 years, Chaparrosa Agri-Service has profitably run a 70,000 acre Texas ranch. And Chaparrosa Agri-Service is noted for management in international ranching operations.

Complete management. Experience. Expertise. For a fee, Chaparrosa Agri-Service can ensure your investment is well protected. For a brochure describing our complete Agri-Service program, phone or write:
Dudley T. Campbell, President
2000 NBC Building, San Antonio, Texas 78291 (512) 227-5101

J3 Chaparrosa Agri-Service

2000M

Wichita Falls Clinic

501 Midwestern Parkway East, Wichita Falls, Texas 76302

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Clark W. Brazil, M.D.

GENERAL THORACIC AND VASCULAR SURGERY
Cecil H. Meares, M.D.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
David G. Borman, M.D., F.A.C.S.
Richard H. Moore, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOLOGY AND RADIOACTIVE ISOTOPES
Thomas K. Bose, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
Joseph Bilder, Jr., M.D.
George W. Slaughter, M.D.

INTERNAL MEDICINE
P. K. Smith, M.D., F.A.C.P.
I. L. Humphrey, Jr., M.D.
Preston McCall, M.D.
Julian C. Sleeper, M.D., Cardiology
David M. Pogue, M.D., Cardiology
Wendell I. Wyatt, M.D.
Lowell L. Harvey, M.D.

FAMILY PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
James T. Cook, M.D.
Madeleine Kent, M.D.

UROLOGY
John C. Wurster, M.D.

OBSTETRICS AND GYNECOLOGY
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
James M. Missler, Administrator

Bank Financing for Physicians

We specialize in equipment leasing and financing, unsecured loans and lines of credit to Physicians And we handle it all by mail.

Unsecured loans with optional dollar amounts (to $10,000), optional payment schedules. Equipment leasing to give you tax advantages, restore operating capital, convert unused depreciation to cash. And lines of credit to provide for future cash needs.

We charge tax deductible bank rates. You won't spend any of your valuable time at your bank, and you'll reserve your regular bank credit for times when you really need it.

For further information, complete and mail this coupon today. I want to know more about:

__ Unsecured Loans __ Sale & Lease Back Plans
__ A Line of Credit __ Lease-Purchase Plans
__ Equipment Leasing __ Equipment Financing
__ Other: _____

Dr. _____ Phone _____
Address _____
City _____ State ____ Zip _____

Professional Services Division
TEXAS BANK AND TRUST COMPANY
P. O. Box 101 Jacksonville, Texas 75766

Starlite Village Hospital

Center Point, Texas

Ph.: 634-2212
634-2213

- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

CHAMPUS APPROVED
JCAH: ACCREDITED.

DOCTORS ARE TALKING ABOUT THE PRACTICAL WAY TO LOWER CHOLESTEROL

Choloxin®
(Sodium Dextrothyroxine)

And for good reasons. Diet alone doesn't always work. CHOLOXIN® (sodium dextrothyroxine) has proved itself to be an effective cholesterol lowering adjunct to diet in euthyroid, non-cardiac patients. It has undergone ten years of clinical trials and eight years of practice. The clinical trials consisted of 337 clinical studies involving over 3,000 hypercholesterolemic non-cardiac patients. It is among the most thoroughly evaluated drugs ever presented to physicians.

Practical, too, is the one-tablet-a-day dosage regimen. It encourages patient cooperation, and it's economical for long-term therapy.

CHOLOXIN (sodium dextrothyroxine) lowers cholesterol 15% to 35%, and keeps it down with most patients. *(Data on file, Flint Laboratories).*

Interested in receiving more information about lipid lowering? Write us or contact your Flint representative. We'll be glad to supply you with a complete product portfolio and samples for your evaluation.

NOTE: See following page for full prescribing information.

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

Choloxin® (Sodium Dextrothyroxine)

Effectively Lowers Elevated Cholesterol With Convenient Once-A-Day Dosage

Four strengths 1, 2, 4, and 6 mg are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage.

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below.

	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1.0-2.0 mg.	1.0-2.0 mg.	4.0-8.0 mg.	4.0-8.0 mg.
Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac	1.0 mg.	1.0 mg.	4.0 mg.	4.0 mg.

Choloxin®
(Sodium Dextrothyroxine)

Description

CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as D-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions

The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN (sodium dextrothyroxine) stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic end-products do not accumulate in the blood.

Indications

This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Before prescribing, note the following:

Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN (sodium dextrothyroxine) is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively, in patients with significant myocardial impairment. CHOLOXIN (sodium dextrothyroxine) dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications

The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease; history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings

CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN (sodium dextrothyroxine) is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN (sodium dextrothyroxine) is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN (sodium dextrothyroxine). As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN (sodium dextrothyroxine) than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN (sodium dextrothyroxine) in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may not be advisable or possible to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN (sodium dextrothyroxine) therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age

Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions

It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN (sodium dextrothyroxine) therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions

The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN (sodium dextrothyroxine); a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN (sodium dextrothyroxine) potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration

For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is approximately 0.1 mg (100 mcg) per kilogram. The initial daily dosage should be approximately 0.05 mg (50 mcg) per kilogram to be increased in up to 0.05 mg (50 mcg) per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

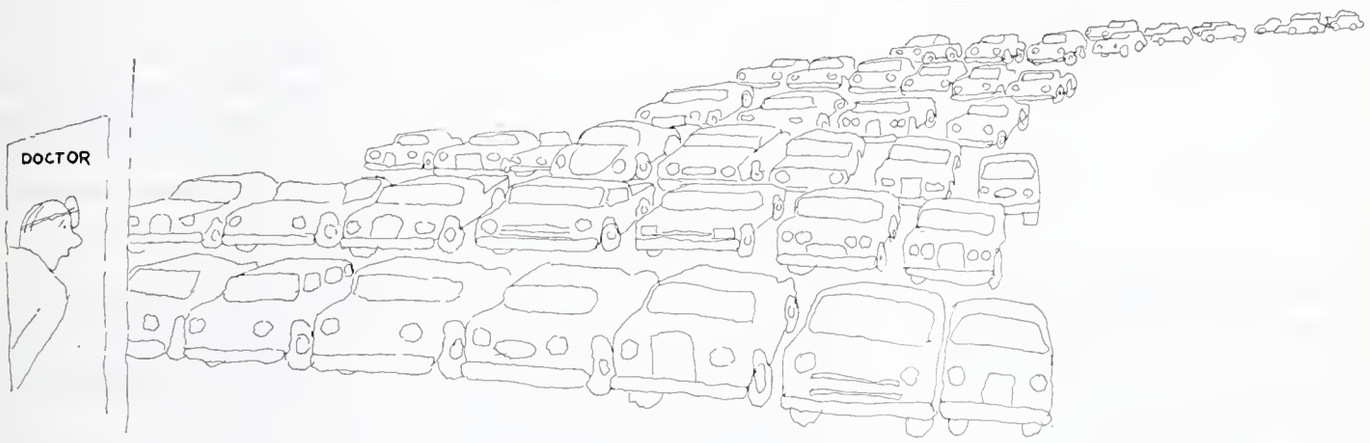
If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied

CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES INC.
Deerfield, Illinois 60015

OPEN WIDE AND SAY . . .



AAAHHHHHHHH!

We've got more cars than you can shake a thermometer at. Any model, any make — American or foreign. You just choose the car you want. Load it up with all the extras. Then we'll make the leasing arrangements. All you have to do is get in and drive it away.

Why else should you lease from us?

- Low lease cost
- Tax write-offs
- Positive cash flow
- No record keeping necessary
- Custom-tailored leases
- Total maintenance of Lincoln-Mercury products.

Texas Medical Association Automobile Lease Program

Underwritten by:

Bankston Rentals, Inc. • 4747 LBJ Freeway • Dallas, Texas 75234 •214/233-1441
Southwest Motor Leasing, Inc. • 6737 Southwest Freeway • Houston, Texas 77074 • 713/777-3816

CONTINUING EDUCATION COURSES

APRIL

Adolescent's Medical Care

Title: Symposium on Sports Medicine
Sponsors: UT Health Science Center at San Antonio; Student Health Services at UT, Austin
Location of Course: Joe C. Thompson Conference Center, Austin
Dates: April 16-17, 1977
Duration: 6 hours Saturday; 4 hours Sunday; 10 total course hours
Fee: Physicians, $75; Coaches, trainers, $35; Late registration (after April 2), $90/$50
Designed For: Team physicians; Coaches; Trainers
Enrollment: Minimum, 50; Maximum, 300
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, patient demonstration, television
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Cardiovascular Disease

Title: Cardiovascular Echocardiography
Sponsors: American College of Physicians; Baylor College of Medicine, Houston
Location of Course: Jesse H. Jones Library, Texas Medical Center, Houston
Dates: April 20-22, 1977
Duration: Continuous; 3 days; 6-7 hours instruction per day; 18-20 total course hours
Fee: American College of Physicians members, residents, fellows, $130; Nonmembers, $175; Associates, $65
Designed For: Specialists in Internal Medicine, Cardiology
Enrollment: Minimum, 50; Maximum, 250
Credit: 18 hours, AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, workshops
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Dermatology

Title: Dermatology for Primary Care Physicians
Sponsors: Division of Dermatology, Southwestern Medical School, UT Health Science Center at Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: UT Health Science Center at Dallas
Dates: April 15-16, 1977
Fee: $110 (includes luncheons with informal discussion groups Friday, Saturday; syllabus)
Credit: 14 hours, Category 1, AMA Physician's Recognition Award
Contact: Division of Dermatology, Southwestern Medical School, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Internal Medicine

Title: Current Topics in Nephrology
Sponsor: American College of Physicians
Location of Course: Brooke Army Medical Center, Ft Sam Houston
Dates: April 11-13, 1977
Duration: Continuous; 9 am-5 pm; 3 days; 21 total course hours
Fee: American College of Physicians members, residents, $100; Nonmembers, $150; Associates, $50
Designed For: General practitioners; Specialists
Enrollment: Minimum, 100; Maximum, 300
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, seminar
Contact: Linda M. Salsinger, Registrar, American College of Physicians, 4200 Pine St, Philadelphia 19104

Ophthalmology

Title: Phacoemulsification Course
Sponsor: Baylor College of Medicine
Date: April 1977
Duration: 8 hours instruction per day; 3 days; 24 total course hours
Fee: $1,000
Designed For: Specialists in Ophthalmology
Enrollment: Maximum, 15
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, bedside rounds, clinical conference, enrollee performs procedure, laboratory work, programmed instruction, lecture, open question, operative human surgery, patient demonstration, television
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Cancelled: Advanced Course in Ophthalmic Microsurgery; Twelve Oaks Hospital, Houston; April 14-16, 1977

Title: Neuro-Ophthalmology Basic and Clinical Science Course
Sponsors: Texas Ophthalmological Association; UT Health Science Center at San Antonio
Location of Course: UT Health Science

Center at San Antonio
Dates: April 1-2, 1977
Duration: Continuous; 8 am-5 pm; 2 days; 16 total course hours
Fee: Texas Ophthalmological Association members, no fee; Nonmembers, $100
Designed For: Specialists in Ophthalmology, Neurology, Neurological Surgery
Enrollment: Maximum, 80
Credit: 15 hours, Category 1, AMA Physician's Recognition Award
Teaching Method: Audiovisual materials
Contact: Frank J. Bajandas, MD, Assistant Professor, Division of Ophthalmology, 7703 Floyd Curl Dr, San Antonio 78284

Title: 14th Annual Baylor Ophthalmology Residents Alumni Meeting
Sponsor: Baylor College of Medicine, Houston
Dates: April 1-2, 1977
Fee: To be announced
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Pediatrics

Title: Problems of the Newborn
Sponsors: Children's Hospital, Santa Rosa Medical Center, San Antonio; Department of Pediatrics, UT Health Science Center at San Antonio
Location of Course: Children's Hospital, San Antonio
Dates: April 30-May 1, 1977
Duration: Continuous; 4 hours instruction per day
Fee: $20
Designed For: General practitioners; Specialists
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Howard A. Britton, MD, Chairman, Department of Pediatrics, Children's Hospital, Box 7330, Station A, San Antonio 78285

Physical Medicine & Rehabilitation

Title: Eleventh Annual Review Course in Physical Medicine & Rehabilitation
Sponsors: Veterans Administration Hospital, Houston; Baylor College of Medicine, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: April 18-28, 1977
Duration: Continuous; 80 total course hours
Fee: $150
Designed For: General practitioners; Specialists in Physical Medicine & Rehabilitation
Enrollment: Minimum, 50; Maximum, 100
Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar, live clinic
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Psychiatry

Title: Analysis of Fantasy
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: April 23-24, 1977
Duration: Continuous; 11 total course hours
Fee: $80
Designed For: Specialists in Psychology
Enrollment: Maximum, 20
Teaching Methods: Audiovisual materials, open question, seminar
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Radiology & Radioisotopes

Title: Clinical Nuclear Imaging—1977
Sponsors: UT Health Science Center at Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: Fairmont Hotel, Dallas
Dates: April 28-30, 1977
Duration: Continuous; 18 total course hours
Fee: $175; Residents, $75
Designed For: Specialists in Radiology
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, lecture, open question, seminar
Contact: Robert Parkey, MD, Chief, Section of Nuclear Medicine, Department of Radiology, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Surgery

Title: Review Course in Surgery
Sponsor: Baylor College of Medicine, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: April 1-2, 1977
Duration: Continuous; 6 hours per day; 1½ days; 9 am-5 pm; 18 total course hours
Designed For: General practitioners; Specialists in Surgery, Family Medicine
Enrollment: Maximum, 150
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question

Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Urology

Title: Texas Urological Society Annual Meeting
Sponsor: Texas Urological Society
Location of Course: La Posada Motor Hotel, Laredo
Dates: April 15-16, 1977
Duration: Continuous
Fee: $100
Designed For: Specialists in Urology
Enrollment: Maximum, 100
Credit: Pending
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Carlos H. Mata, MD, Secretary-Treasurer, 1012 Santa Ursula Ave, Laredo 78040

Other: Alcoholism

Title: The Scope of Alcoholism
Sponsor: Methodist Hospital of Dallas
Location of Course: Weiss Auditorium, Methodist Hospital of Dallas
Date: April 28, 1977
Fee: $30; Students, $10
Credit: 7 hours, Category 1, AMA Physician's Recognition Award
Contact: Joyce Lebovitz, Director of Social Services, Methodist Hospitals of Dallas, Box 5999, Dallas 75232

MAY

Texas Medical Association's Annual Session, May 11-15, 1977, in Houston, will offer physicians the opportunity to earn up to 32 hours Category 1 credit toward the AMA Physician's Recognition Award. Some of the courses available are listed here. More information on symposia, section meetings, and other continuing education activities being presented in conjunction with the Annual Session is available in the 1977 Texas Continuing Education Directory for Physicians and from Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701.

Adolescent's Medical Care

Title: Conference on School Health
Sponsor: Texas Medical Association, Austin
Location of Course: Holiday Inn Medical Center, Houston
Date: May 12, 1977
Duration: 9:15 am-4:15 pm; 4 total course hours
Fee: None
Designed For: General practitioners; Specialists; School administrators; Nurses
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Aerospace Medicine

Title: Scientific Program of the Texas Chapter of the Flying Physicians Association and the Texas Air-Medics Association
Sponsors: Flying Physicians' Association, Texas Chapter; Texas Air-Medics Association; Texas Medical Association, Austin
Location of Course: Holiday Inn Medical Center, Houston
Date: May 12, 1977
Duration: 9 am-5 pm; 5 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Allergy

Title: Section on Allergy
Sponsor: Texas Medical Association, Austin
Location of Course: Holiday Inn Medical Center, Houston
Date: May 13, 1977
Duration: Continuous; 10 am-5 pm; 5 total course hours
Fee: None
Designed For: Specialists in Allergy
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Anesthesiology

Title: Texas Society of Anesthesiologists Scientific Program
Sponsors: Texas Society of Anesthesiologists; Texas Medical Association, Austin
Location of Course: Shamrock Hilton Hotel, Houston
Date: May 14, 1977
Duration: Continuous; 8:15 am-4:30 pm; 6 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual mate-

rials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Arthritis & Rheumatism

Title: Texas Rheumatism Association Scientific Program
Sponsors: Texas Rheumatism Association; Texas Medical Association, Austin
Location of Course: Holiday Inn Medical Center, Houston
Date: May 14, 1977
Duration: 9 am-5 pm; 5 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Cardiovascular Disease

Title: Cardiovascular Disease—Diagnosis, Management of Acute Patient
Sponsors: American Medical Association; Texas Medical Association, Austin
Location of Course: Holiday Inn Medical Center, Houston
Date: May 15, 1977
Duration: 8 am-1 pm; 5 total course hours
Fee: $55
Designed For: General practitioners; Specialists in Cardiovascular Disease
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Chest Disease

Title: Section on Diseases of the Chest
Sponsors: Texas Medical Association, Austin; American College of Chest Physicians, Texas Chapter
Location of Course: Shamrock Hilton Hotel, Houston
Date: May 14, 1977
Duration: 10 am-4:30 pm; 6 total course hours
Fee: None
Designed For: Specialists in Chest Disease
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Dermatology

Title: Texas Dermatological Society Scientific Program
Sponsors: Texas Dermatological Society; Texas Medical Association, Austin
Location of Course: Texas Children's Hospital, Houston
Dates: May 14-15, 1977
Duration: 9 am-12 pm; 6 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel, clinical conference
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Title: Postgraduate Course on Office Dermatology
Sponsors: American Medical Association; Texas Medical Association, Austin
Location of Course: Holiday Inn Medical Center, Houston
Date: May 15, 1977
Duration: 8 am-1 pm; 5 total course hours
Fee: $55
Designed For: General practitioners; Specialists in Dermatology
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Emergency Care

Title: Symposium on Emergency Medical Services
Sponsors: Texas Medical Association, Austin; American College of Emergency Physicians, Texas Chapter; American Trauma Society, Texas Division
Location of Course: Shamrock Hilton Hotel, Houston
Date: May 12, 1977
Duration: 9 am-4:45 pm; 6 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, laboratory work, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Endocrinology

Title: Texas Diabetes Association Scientific Program
Sponsors: Texas Diabetes Association; Texas Medical Association, Austin
Location of Course: Holiday Inn Medical Center, Houston

Date: May 13, 1977
Duration: 8:15 am-5 pm; 6 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Family Medicine

Title: Texas Academy of Family Physicians Seminar
Sponsors: Texas Academy of Family Physicians; Texas Medical Association, Austin
Location of Course: Shamrock Hilton Hotel, Houston
Date: May 12, 1977
Duration: 9 am-5 pm; 6 total course hours
Fee: $20
Designed For: General practitioners; Specialists
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Title: Section on Family Practice
Sponsor: Texas Medical Association, Austin
Location of Course: Shamrock Hilton Hotel, Houston
Date: May 13, 1977
Duration: 10 am-5 pm; 5 total course hours
Fee: None
Designed For: General practitioners
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Gastroenterology

Title: Section on Digestive Diseases
Sponsor: Texas Medical Association, Austin
Location of Course: Holiday Inn Medical Center, Houston
Dates: May 13-14, 1977
Duration: Continuous; 2:30-5 pm Friday; 8:15 am-12 pm Saturday; 6 total course hours
Fee: None
Designed For: Specialists in Gastroenterology
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Geriatrics

Title: Symposium on Aging
Sponsor: Texas Medical Association, Austin
Location of Course: Shamrock Hilton Hotel, Houston
Date: May 12, 1977
Duration: 2-5 pm; 3 total course hours
Fee: None
Designed For: General practitioners; Specialists in Geriatrics
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Internal Medicine

Title: Section on Internal Medicine
Sponsor: Texas Medical Association, Austin
Location of Course: Shamrock Hilton Hotel, Houston
Date: May 13, 1977
Duration: 8:15 am-5 pm; 6 total course hours
Fee: None
Designed For: Specialists in Internal Medicine
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Neurology

Title: Section on Neurology
Sponsors: Texas Medical Association, Austin; Texas Neurological Society
Location of Course: Houston Marriott Hotel, Houston
Dates: May 12-13, 1977
Duration: 2:30-5 pm Thursday; 10 am-12 pm Friday; 5 total course hours
Fee: None
Designed For: Specialists in Neurology
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

A character all its own.

Valium (diazepam) is a benzodiazepine with a character all its own. Pharmacologically, it has been described as more potent mg-per-mg than other available anxiolytic benzodiazepines. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed, drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

contains no aspirin

tablets

Darvocet-N® 100

100 mg. Darvon-N® (propoxyphene napsylate)
650 mg. acetaminophen

Lilly

Additional information available to the profession on request from Eli Lilly and Company Indianapolis, Indiana 46206

700184

Eli Lilly and Company, Inc.
Carolina, Puerto Rico 00630

Diagnosis and treatment of allergic disorders

Elton Dupree, MD

Approximately 10% of the population in the United States is afflicted with an allergic disorder. For the most part, diagnostic procedures and therapy have been largely empirical. This article describes recent advances in our understanding of the pathogenesis of allergies and shows how the knowledge has affected diagnosis and treatment.

History

In 1873, Blackley provoked attacks of hay fever in himself and his patients by deliberate inhalation of grass pollen. He also showed that localized reactions could be elicited by the application of pollen grains to abraded skin and to the conjunctiva. These experiments were the basis of skin and conjunctiva provocation testing with extracts of pollen.

In 1921, Prausnitz demonstrated that local skin sites could be passively sensitized by intradermal injection of serum from a fish-sensitive donor (Kustner). A second injection, 24 hours later, provoked an immediate weal and flare reaction similar to those elicited by injection of the allergen into the skin of the patient.

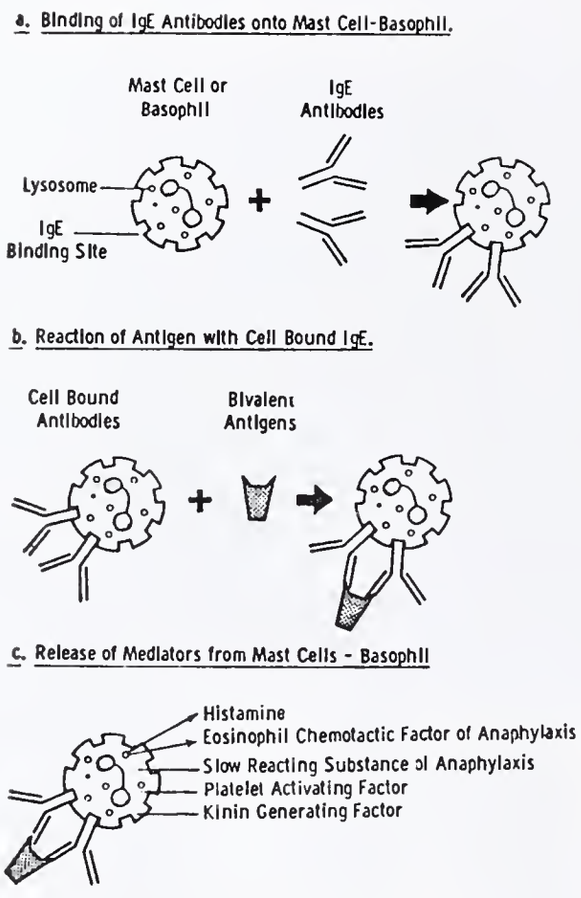
Coca and Grove used the Prausnitz-Kustner (P-K) test in an extensive study of passive transfer of serum from pollen-sensitive individuals. They showed that normal skin rapidly became sensitized after passive transfer and this sensitization was detectable for at least four weeks after transfer. The activity was greatly reduced by heating the serum at 56° C for 30 minutes. Since these initial studies, allergists have used immediate hypersensitivity reactions for diagnostic purposes, but the immunologic and biochemical mechanisms of these reactions remained obscure until recent years.

Pathogenesis

The whole question was dramatically clarified by the discovery of the immunoglobulin class that is the principal source of anaphylactic antibodies in man. In 1967, Ishizaka[1] found that reaginic antibodies were a new class of immunoglobulin, which he termed IgE. At about the same time, Johansson[2] discovered a myeloma protein with properties similar to those of IgE. Subsequently, it has been shown that IgE is responsible for many immediate hypersensitivity reactions in man. IgE is produced principally by the lymphoid tissues of the respiratory and alimentary tracts and has a predilection to bind to mast cells in tissues or basophils in blood. The constant region (Fc) of IgE antibodies binds to receptors of the surface of basophils and mast cells (Fig 1a). When an allergic person is challenged with antigens against which this antibody is directed, these antigens then combine with the variable region of the IgE molecules (Fig 1b). If an antigen bridges two molecules of the cellbound IgE, the cells are induced to release the mediators of acute hypersensitivity (Fig 1c).

Currently, five low-molecular-weight compounds released from basophils and mast cells are known to mediate Type I hypersensitivity reactions. The best known of these mediators, histamine, is stored with heparin in the lysosomes of basophils and mast cells in an electrostatically bound form.[3] Histamine and other mediators have varied effects on tissues (Fig 2).

The second of these mediators, slow-reacting substance of anaphylaxis (SRS-A), is generated in cytoplasm of the cell as a result of antigen-IgE antibody interaction. SRS-A causes a more prolonged contraction of smooth muscle[3] (Fig 3) and is thought to be of major significance in pro-


a. Binding of IgE Antibodies onto Mast Cell-Basophil.
Mast Cell or Basophil
IgE Antibodies
Lysosome
IgE Binding Site
b. Reaction of Antigen with Cell Bound IgE.
Cell Bound Antibodies
Bivalent Antigens
c. Release of Mediators from Mast Cells - Basophil
Histamine
Eosinophil Chemotactic Factor of Anaphylaxis
Slow Reacting Substance of Anaphylaxis
Platelet Activating Factor
Kinin Generating Factor

1. Mechanism of immediate hypersensitivity reactions.

Reactions	Histamine	SRS-A	Bradykinin
Contraction of smooth muscle	+	+	+
Stimulation of Mucus secreting glands	+	–	–
Increased permeability of blood vessels	+	+	+
Stimulation of pain fibers	–	?	+

2. The mediators of Type I hypersensitivity.

longing asthma attacks.

A third factor, platelet activating factor (PAF), is also produced as a result of the antigenic bridging of IgE molecules. PAF promotes aggregation and degranulation of platelets, which results in the release of additional histamine.[4]

The fourth factor, basophil kallikrein of anaphylaxis (BK-A), resembles histamine in the kinetics of its release. It is distinct from plasma kallikrein, but cleaves bradykinin from kininogen, causing contraction of smooth muscle, increase in capillary permeability, and stimulation of pain fibers.[5]

A fifth mediator, eosinophil chemotactic factor of anaphylaxis (ECF-A), is preformed and stored in the lysosomes of basophils and mast cells. ECF-A is chemotactic for eosinophils at the sites of immediate hypersensitivity reactions.[6]

The role of eosinophils in allergic reactions is not entirely clear, but several things are known. Eosinophils engulf antigen-antibody complexes, degrade histamine, and release an enzyme, arylsulfatase, which breaks down SRS-A.[7] A recent report indicates that eosinophils contain phospholipase D, an enzyme that inactivates PAF.[8] Therefore, it appears that eosinophils might act to limit the duration and intensity of immediate hypersensitivity reactions.

Diagnostic Tests

IgE levels can be measured quantitatively by a radioimmunoabsorbent (RIST) procedure which involves the competition of IgE molecules with a radio-labeled IgE for an antiserum to human IgE.[9] Normal serum IgE levels are low in comparison to other immunoglobins (Fig 4). IgE is usually increased in atopic diseases such as atopic

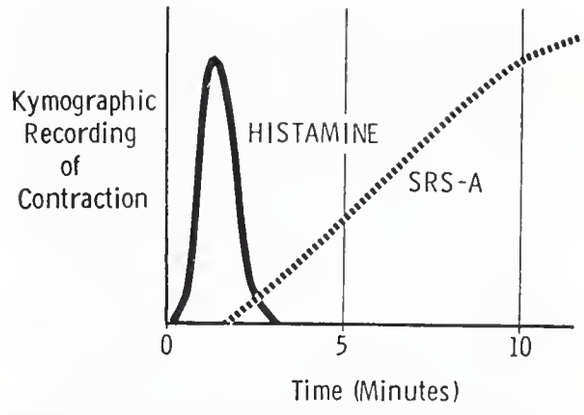
dermatitis and asthma. Since IgE elevations also occur with certain intestinal parasites and certain immunodeficiencies as well as with IgE myelomas, the finding of an elevated IgE level is not specific for allergic diseases.

Allergen skin testing is the most widely used method for diagnosis of acute allergic IgE-mediated disorders. Aqueous extracts of common allergens (house dust, weeds, fungi, grasses) are used in scratch or intradermal tests. The diameter of the erythema and induration of the reactions are measured 15 minutes after injection. Skin reactions to pollens are of value in predicting clinical hypersensitivity to those allergens. Tests with epidermoids, dust, and fungi are somewhat less specific. Skin tests with food allergens are generally of little value.

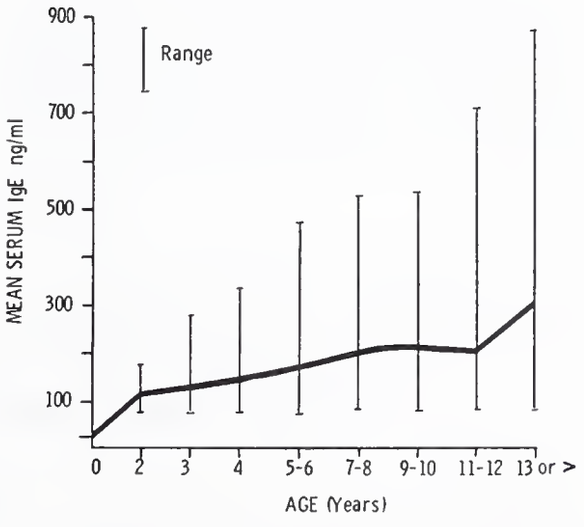
Although skin testing is clinically useful, there are several disadvantages: (1) the skin test reaction is significantly influenced by the thickness and texture of the skin and by drugs that interfere with the reaction, (2) the test does not measure IgE antibodies directly, and (3) anaphylaxis may occur from even a small dose of allergen.

A more useful procedure than the RIST, the radio-allergosorbent test (RAST), measures IgE antibodies to specific allergens (Fig 5).[10] This procedure has none of the disadvantages of skin tests, although it appears to be somewhat less sensitive than skin tests and is more expensive. This test measures serum IgE antibodies, whereas skin tests detect mast cell-bound antibodies. In addition to the RAST, it is possible to detect serum IgE antibodies on basophils by measuring the histamine released from allergen-treated basophils by a fluorometric technique.[11]

Because of the release of ECF-A, large numbers of eosinophils accumulate at the



3. The sequence of smooth muscle contraction caused by histamine and slow-reacting substance of anaphylaxis (SRS-A).



4. Relationship of age and serum IgE levels.

site of allergic reactions. The diagnosis of acute allergic respiratory disease is therefore facilitated by finding numerous eosinophils in nasal secretions or sputum in the absence of greatly increased blood eosinophils. However, nasal eosinophilia may also occur with certain types of foreign bodies or with the overuse of topical alpha adrenergic decongestants such as phenylephrine.

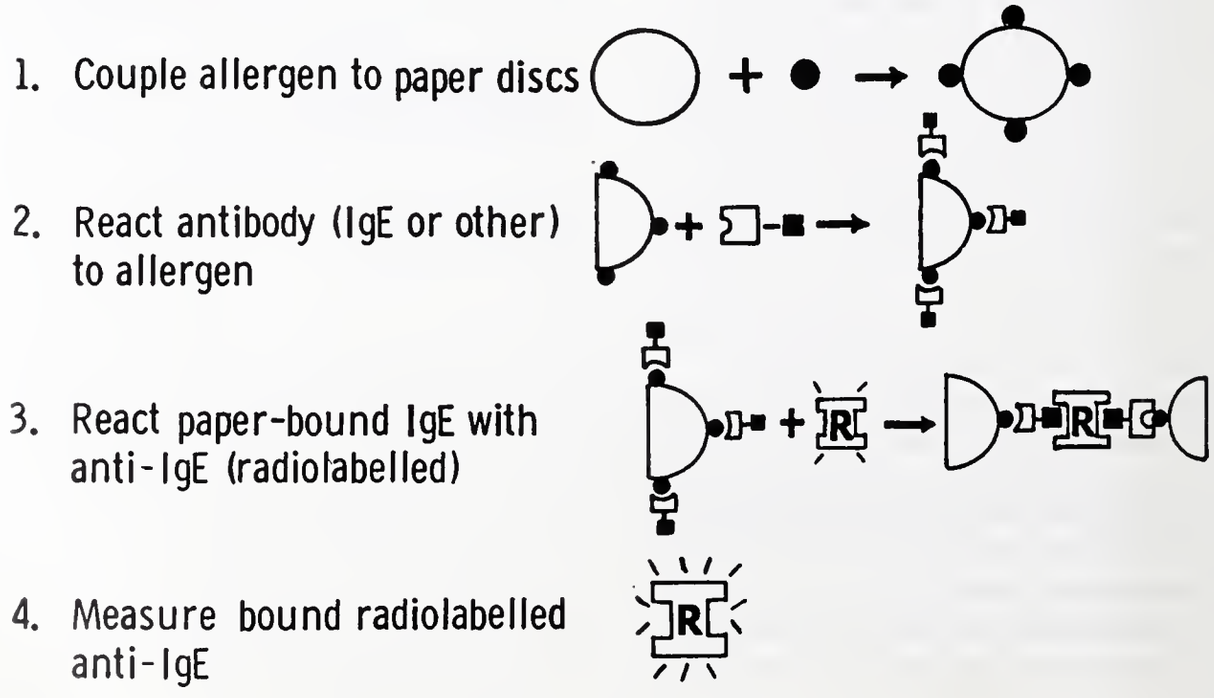
Allergen elimination and provocation still remains the best diagnostic aid in the diagnosis of food allergy. In suspected food allergy, the allergen should be eliminated for seven to ten days. If the patient's symptoms disappear, then the allergen should be reintroduced to determine if similar symptoms recur. Similar elimination-provocation trials may also be useful in diagnosing allergies to inhalants. Provocation trials are potentially hazardous, however, and should be conducted in the hospital or a physician's office.

Treatment

Allergic disorders are best treated by interrupting the pathogenesis of the reactions (Fig 6). It is not possible, as yet, to prevent the production of IgE, but theoretically it may be possible to interfere with the binding of antigens to IgE molecules by hyposensitization. This theory proposes that by injecting antigens subcutaneously, an IgE-blocking antibody is produced. This antibody readily diffuses out into tissues and binds the allergen before it is able to reach the IgE that is fixed onto the mast cells. By prohibiting allergens from reaching the IgE bound to mast cells, mediators are not released.

The best treatment, however, would be

5. Radioallergosorbent test (RAST).


1. Couple allergen to paper discs
2. React antibody (IgE or other) to allergen
3. React paper-bound IgE with anti-IgE (radiolabelled)
4. Measure bound radiolabelled anti-IgE
R
R
R

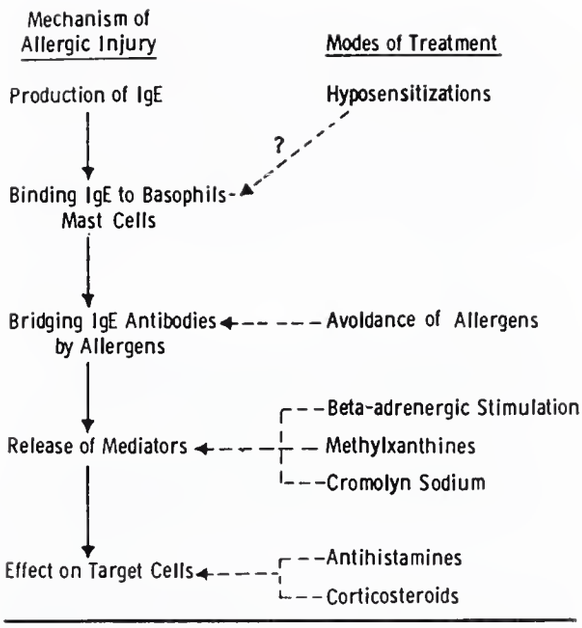
avoidance of the offending allergen. If the allergens responsible can be recognized, they should be eliminated from the patient's environment. This may be practicable, as in the elimination of certain animal danders, or very difficult, as with the elimination of house dust, human mite antigens, or pollens.

The decrease in the suppression of mediators of immediate hypersensitivity by increasing the intracellular level of cyclic 3,5 AMP, the so-called second messenger, has been established. This may be accomplished by either beta adrenergic stimulation or by inhibition of the enzymatic degradation of cyclic 3,5 AMP by methylxanthines[12] (Fig 7). Cromolyn sodium also interferes with mediator release, probably also by inhibiting phosphodiesterase and slowing the degradation of cyclic 3,5 AMP.[13]

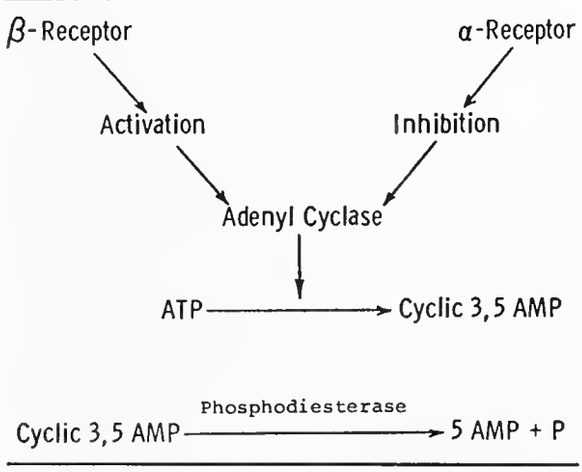
Another method of treatment is the use of analogues of histamines, antihistamines, which can compete with histamine for binding sites on the target organ. However, antihistamines do not compete with or antagonize other mediators such as SRS-A.

Corticosteroids are effective in serious allergic disorders that do not respond to other measures (in part by stabilizing lysosomal membranes), but the mechanism of their action is not entirely understood.[14]

In allergic rhinitis, Hymenoptera hypersensitivity, and possibly other allergic disorders that are uncontrolled by avoidance of allergens or by drug therapy, hyposensitization should be considered. The majority of pollen-sensitive patients with seasonal allergic rhinitis improve after months or years of this immunotherapy. The efficacy of this mode of treatment with other allergens and in other allergic diseases is less well proven.



6. Treatment of allergic disorders by interruption of the pathogenesis of the reactions.



7. Production and degradation of cyclic 3,5 AMP.

This comprehensive review article was prepared for *Texas Medicine* through the cooperation of Edward N. Brandt, MD, Dean, and Michael M. Warren, MD, Chairman, Continuing Education Committee, The University of Texas Medical Branch, Galveston.

References

1. Ishizaka K, Ishizaka T, Hornbrook MM: Physicochemical properties of human reaginic antibody. IV. Presence of a unique immunoglobulin as a carrier of reaginic activity. J Immunol 97:75-85, 1966.

2. Johansson SG: Raised levels of a new immunoglobulin class (IgND) in asthma. Lancet 2:951-953, 1967.

3. Brocklehurst WE: The release of histamine and formation of a slow-reacting substance (SRS-A) during anaphylactic shock. J Physiol (London) 151:416-435, 1960.

4. Benveniste J: Platelet-activating factor, a new mediator of anaphylaxis and immune complex deposition from rabbit and human basophils. Nature 249:581-582, 1974.

5. Newball HH, Lichtenstein LM, Talamo RC: Basophil kallikrein of anaphylaxis (BK-A). Fed Proc 34:1045, #4686, 1975.

6. Kay AB, Stechschulte DJ, Austen KF: An eosinophil leukocyte chemotactic factor of anaphylaxis. J Exp Med 133:602-619, 1971.

7. Wasserman SI, Goetzl EJ, Austen KF: Inactivation of slow reacting substance of anaphylaxis by human eosinophil arylsulfatase. J Immunol 114(2 pt 1):645-649, 1975.

8. Kater LA, Goetzl EJ, Austen KF: Isolation of human eosinophil phospholipase D. J Clin Invest 57:1173-1180.

9. Johansson SG, Mellbin T, Vahlquist B: Immunoglobulin levels in Ethiopian preschool children with special reference to high concentrations of immunoglobulin E (IgND). Lancet 1:1118-1121, 1968.

10. Wide L, Bennich H, Johansson SG: Diagnosis of allergy by an in-vitro test for allergen antibodies. Lancet 2:1105-1107, 1967.

11. Lichtenstein LM, Osler AG: Studies on the mechanisms of hypersensitivity phenomena. IX. Histamine release from human leukocytes by ragweed pollen antigen. J Exp Med 120:507-530, 1964.

12. Lichtenstein LM, Margolis S: Histamine release in vitro: inhibition by catecholamines and methylxanthines. Science 161:902-903, 1968.

13. Lavin N, Rachelefsky GS, Kaplan SA: An action of disodium cromoglycate: inhibition of cyclic 3', 5'-AMP phosphodiesterase. J Allergy Clin Immunol 57:80-88, 1974.

14. Aviado DM, Carrillo LR: Antiasthmatic action of corticosteroids: a review of the literature on their mechanism of action. J Clin Pharmacol 10:3-11, 1970.

Dr Dupree, 6065 Hillcroft, #209, Houston, TX 77081.

Corticosteroids in allergy: a 25-year review

William C. Grater, MD

The author chronicles his clinical use of corticosteroids in 25 years of medical practice. He discusses changes in his rationale of therapy since 1963 which have resulted in a great decrease in use. Steroid-sparing agents and modalities of therapy are outlined.

Introduction

After 25 years of intensive use, the efficacy of corticosteroids in allergic disorders has been established, but their exact mode of action has not. I reviewed this subject in 1963[1] after 12 years of continuous clinical investigation of many systemic and topical corticoid preparations. The array of preparations from which to choose and the knowledge of how to use them has increased. Nevertheless, corticosteroid therapy in allergy has remained an art.

The use of adrenal corticosteroids has had a tremendous influence on the practice of allergy. This chemical utopia has been shattered by the gradual realization that corticosteroids cured nothing, and that the complication of decreased growth in children, enhancement of certain viral infections, activation of peptic ulcers, myopathy, and dependence on steroids were very real dangers. Allergists now agree that corticosteroid therapy is no substitute for an adequate allergy investigation followed by appropriate treatment.

Structure of Cortisol and Synthetic Analogues

Cortisol (hydrocortisone) is the glucocorticoid naturally secreted by the adrenal cortex. It is an anti-inflammatory steroid. Cortisol and other anti-inflammatory steroids containing a two-carbon chain attached to the 17 position are termed corticosteroids. A hydroxyl group at C 17 is necessary for the fullest expression of anti-inflammatory activity. To become active, cortisone must be altered to cortisol and prednisone must be altered to prednisolone by the liver. Pituitary corticotropin activity depends on a responsive adrenal cortex.

The biological properties of cortisol can be quantitatively altered by various substitutions on the steroid nucleus. Perhaps the biggest clinical advancement from chemical changes of the basic molecule was the introduction of a 1,2 double bond changing cortisol to prednisolone. Prednisolone is more potent and has less sodium retaining properties than cortisol. Fluorination increases potency and duration of action.

Another consequence of modifying steroid structure is that the different steroid analogues have different half-lives. Tissue half-lives correlate with anti-inflammatory activity and also with hypothalamic-pituitary-adrenal suppression. The metabolic action initiated at the tissue level persists for a much longer time. All those details must be considered in choosing the best steroid preparation for initial, replacement, and maintenance therapy.

Side effects of the analogues differ. Not only does the corticosteroid portion of the molecule have specific effects, the attached salt also modifies its behavior (Fig 1).

In allergy, corticosteroids are given orally, injected, and used topically on the skin and in the nose, lung, and eye.

Oral Preparations

Information regarding the relative potencies of oral steroid preparations is available in standard pharmacology texts, and is

	Average No. Days
1. Tertiary butyl acetate	28
2. Acetonide—Kenalog (Triamcinolone acetonide)	21
3. Diacetate—Aristocort Forte (Triamcinolone diacetate)	17
4. Acetate—Depo-Medrol (Methylprednisolone acetate)	12
5. Phosphate—Decadron Phosphate (Dexamethasone sodium phosphate)	1

1. Effect of salt on duration of action of injectable corticosteroids.

Medication	No. Patients	Results Satisfactory
Medrol, 1 mg	17	11 (65%)
Medrol, 2 mg	15	10 (67%)
Medrol, 4 mg	18	15 (83%)
Placebo	12	3 (25%)
Orthoxine, 75 mg	15	9 (60%)
Medrol, 1 mg, with Orthoxine, 75 mg	18	14 (78%)
Medrol, 2 mg, with Orthoxine, 75 mg	17	15 (88%)
Medrol, 4 mg, with Orthoxine, 75 mg	18	16 (89%)
Totals	130	93

2. Results of treatment in asthma using coded medicaments.

necessary when changing the patient's medication.

The atopic patient responds to lower doses during a shorter course with less complications than do patients with other disorders such as rheumatoid arthritis. Furthermore, allergic disorders frequently have spontaneous remissions for prolonged periods especially if the allergic reactivity can be suppressed.

Initial Oral Therapy

Two tablets of any oral steroid preparation, taken four times daily, will suppress the symptoms in most uncomplicated cases of asthma. Somewhat higher doses are needed for poison ivy, acute drug allergies, and status asthmaticus. Once suppression has been accomplished, a gradual weaning is desirable. With oral therapy in asthma, this may be difficult because of poor patient cooperation, resistant infection, and the phenomenon of patient escape. The patient may obtain corticosteroids from another source and return years later with complications such as peptic ulcer, osteoporosis, or hypothalamic-pituitary-adrenal suppression. Although the management has not been fully in your hands, you are the responsible initiating physician.

Remember, when you choose the double-edged sword of corticosteroid therapy, that you have long-term responsibilities. During 1975, in more than 1,000 new allergy patients, only eight times did I initiate treatment with oral steroids. Seven patients had poison ivy and one had a severe drug rash, and I treated them with injectable steroids.

Yes, I have changed my mind about frequent oral steroids in the past 13 years. Before 1963 I investigated by clinical study most of the available oral corticosteroid preparations. I realized that simply too

many patients became dependent on steroids, and that there were too many steroid side effects. It may take up to a year after cessation of medication for the hypothalamic-pituitary-adrenal axis to return to normal. The more I see of the long-term suppression of T-cell functions, the less inclined I am to initiate treatment with steroids. I have a strong suspicion, although it is unproven, that the body's response to specific allergy immunotherapy is inhibited by maintenance doses of oral corticosteroids. I hope, in the future, to recognize and profit by my mistakes.

Maintenance Oral Therapy

The Drug Committee of the American Academy of Allergy[2] found the side effects of corticosteroids related to both dose and time. Therefore, giving the smallest possible dose per year is important in maintenance therapy.

While steroid combinations with other drugs have been gradually discontinued, concomitant use of other medications is sometimes helpful in decreasing the amount of corticosteroid required. Note the decreased use of methylprednisolone (Medrol) with methoxyphenamine (Orthoxine) shown in Fig 2.

Sedative antihistamines such as promethazine (Phenergan) and hydroxyzine (Atarax) can be helpful in relieving anxiety and allowing decreased steroid dosage in a disturbed patient. This is especially true when the patient is stimulated by adrenergic drugs. Although no longer marketed, a combination of hydroxyzine and prednisolone (Ataraxoid) had a much higher patient acceptance than prednisolone alone.

When a patient on a maintenance regimen of steroids is doing poorly, a white blood cell count with differential, throat culture, gram stain of sputum, and examination may help by revealing a low-grade infection. If the patient has had inhalation therapy, look for *Pseudomonas* and other gram-negative bacteria. Institute appropriate antibiotic therapy at once.

Side effects increasing or decreasing the appetite, stimulating or depressing the psyche, or causing muscle weakness, are important in tailoring maintenance therapy to the individual patient. Prednisolone tends to increase the appetite. Triamcinolone often will decrease the appetite, is a psychic depressant, and may cause muscle weakness. Dexamethasone and betamethasone are appetite and psychic stimulants. My most frequent choices are methylprednisolone and paramethasone.

The single daily dose regimen was derived from the fact that the greatest normal excretion of hydrocortisone occurs in the early morning. In 1962, I shifted two groups of steroid-dependent asthmatics to a single-dose schedule, and was successful with 90% and 87% of the respective groups.

Then along came the every-other-day dose, with much publicity. Unfortunately, less than half of my steroid-dependent patients could be maintained on it. While such a regimen may have a place in weaning, its place in maintenance is less certain. If a patient can be handled on an every-other-day dose, he usually doesn't need steroids anyway. In my opinion, intermittent repository injectable steroid dosage is preferable.

ACTH (adrenocorticotropic hormone) is simply too strong a sensitizing preparation, and until synthetic derivatives are commercially available, should be restricted to investigation of the functional status of the adrenal cortex.

Generic prednisone can be unreliable in strength, is often easily obtained without

medical approval, requires a functioning liver, is not active topically, and leaves the physician with no knowledge of the excipient.

In summary, I suggest that you do not use: (1) ACTH, (2) oral generic prednisone, (3) alternate-day maintenance therapy, or (4) systemic corticosteroid therapy before a thorough atopic allergy investigation.

Injectable Preparations

Injectable corticosteroids are the best medication available to achieve maximum patient relief with a minimum of side effects. For practical purposes, the injectable corticosteroid preparations can be divided into immediate and repository preparations (Fig 1). The salt affects not only the solubility and duration of action, but is also related to subcutaneous fat necrosis. This transient side effect occurs most often in women of menstrual age.

Immediate Acting Therapy

Hydrocortisone, prednisolone, methylprednisolone sodium succinate (Solu-Medrol) and dexamethasone phosphate (Decadron Phosphate) are available. Triamcinolone phosphate (Aristosol) is not available in the United States.

Fig 3 shows a clinical comparison between dexamethasone phosphate and triamcinolone phosphate. They were about equal in onset of action, and almost parallel in effect on the total peripheral eosinophil count.

The advantages of using short-acting injectable corticosteroids are:

1. Long-term side effects are avoided because the excretion of the drug is almost complete within 24 hours.
2. High-loading doses can be administered easily because no immediate toxicity has been demonstrated.
3. In my experience the short-acting corticosteroids do not interfere with action of antibiotics, epinephrine, or aminophylline.
4. There has been no evidence of any local reactions in the tissue following the administration of these preparations.
5. The presently available preparations act rapidly. Following a single intramuscular injection, impressive blood levels are reached in 10 minutes with a peak blood level in 30 minutes,[3] and intravenous administration may be used to treat shock.

Patients having had steroid therapy or following a maintenance regimen may present a unique problem of hypoadrenalism under stress. Intravenous methylprednisolone sodium succinate may be life-saving in this situation. In general, dexamethasone phosphate is my choice of an immediate-acting steroid.

Respository Steroid Therapy

Injectable depot steroids have gained a well-established place in allergy therapy. As Fig 1 shows, preparations differ, and it is advantageous to be well acquainted with at least two.

In attempting to change a group of 41 patients from oral maintenance therapy to repository therapy, I was successful with only 15. Not very impressive results. Yet respository therapy may be useful in steroid-dependent children whose growth is being suppressed.

Case Report: An obese boy with severe life-long asthma was hospitalized in November 1962 and discharged in August 1964. I first saw him in November 1964, and he had been taking 20 mg oral triamcinolone daily for more than one year. He

was 10 years old, 132 cm (52 inches) tall, and weighed 36.7 kg (81 lb). Therapy with intermittent injectable repository corticosteroid was begun. During a period of one year, the steroid given averaged 3.5 mg triamcinolone daily. By March 1969, the boy had grown 14 cm (5½ inches) and gained 8.6 kg (19 lb).

Comment: An asthmatic patient with severe steroid dependency was treated with injectable repository corticosteroid. The result was decreased steroid intake and some linear growth.

Corticosteriod therapy in allergy is now a way of practice. It matters little whether or not the physician raves on the dangers of the initiation of corticoids. The fact remains that many of the new patients the allergist sees have had previous steroid therapy. Some may have partial hypothalamic-pituitary-adrenal suppression; some may be dependent on steroids. If injectable steroids aid in the management of such patients, a particle of good has been accomplished. The decrease in side effects may be impressive, and make the effort to treat with depot injectable preparations rather than oral ones well worthwhile (Fig 4).

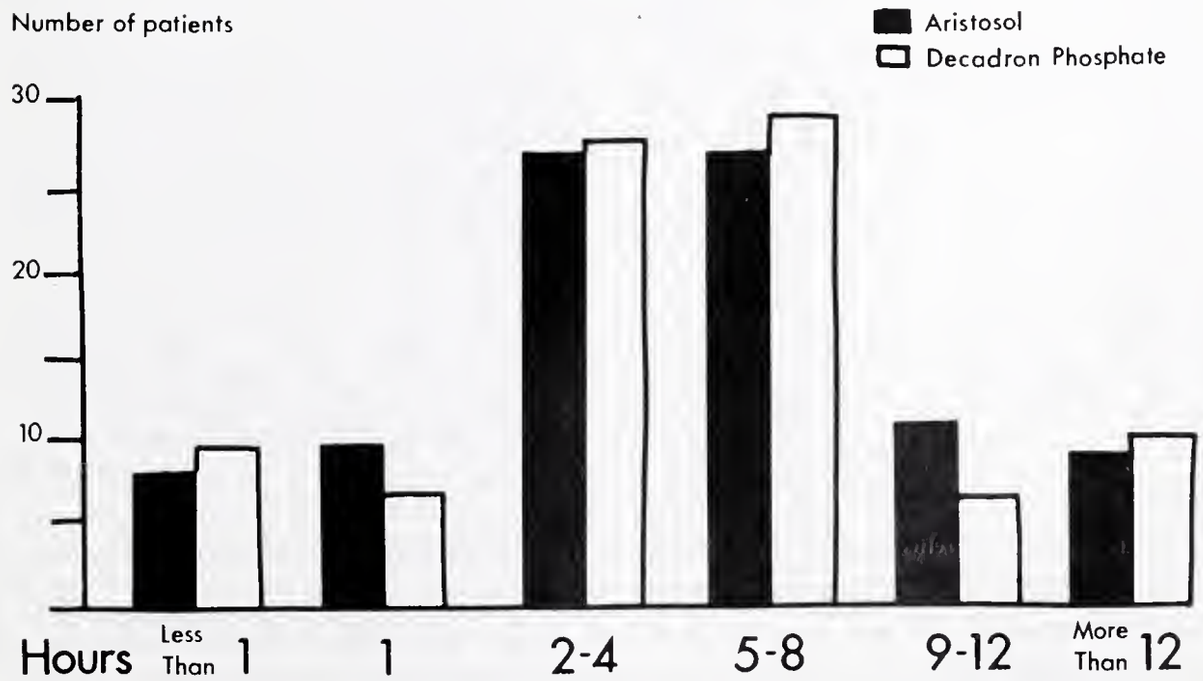
The advantages of injection over oral administration are:

1. The physician retains complete control of therapy, enabling him to use the minimum amount of steroids he considers necessary. This may allow earlier termination of therapy and prevent steroid dependence. It is also of value in clinics where patients cooperation is too often poor, particularly regarding oral medication.

2. The intestinal route is bypassed and gastric irritation is avoided. In 25 years I treated more than 100 patients with histories of peptic ulcers, and none had a flare-up of the ulcer.

3. More uniform absorption allows a

3. Onset of effective response.



satisfactory therapeutic level with a gradual weaning effect.

My favorite preparations at present are methylprednisolone acetate (Depo-Medrol) and triamcinolone diacetate (Aristocort Forte). I usually use 80 mg (2 cc) intramuscularly. Dexamethasone phosphate can be used simultaneously for immediate effects. This combination of short- and long-acting injectable corticosteroids is most useful.

Topical Preparations for the Skin

Topical steroid therapy has proved extremely successful in disorders of the skin related to allergy. With present preparations, significant systemic effects are most unlikely. Although antibiotic combinations are no longer available except for the eye, they were quite useful. The vehicles have been improved during recent years. The potent steroid preparations are most useful in atopic and contact dermatitis. According to Lee and Rapp,[4] there are four levels of topical steroid activity. In order of increasing potency they are: (1) hydrocortisone; (2) flurandrenolone,* triamcinolone acetonide, floucinolone acetonide; (3) betamethasone valerate; and (4) fluocinonide.

Newer topical steriods continue to be investigated. Some have marked steroid activity (chobetasol proprionate*) while others have more efficient vehicles (urea base). Still others, (hydrocortisone butyrate) claim a high potency unaccompanied by increased local or systemic complications. The future is bright.

Cutaneous damage from the more potent fluorinated steroids has been reported.[5] Local cutaneous damages reported are atrophy, purple striae, enhanced pathogenicity of surface fungi, and a remarkable form of acne rosacea with prominent telangiectasia on the face. A. A. Fisher (personal communication) says that topical steroid therapy can be continued successfully if 1% hydrocortisone is used.

4. Comparison of side effects of dexamethasone by oral and injection routes.

	Oral* 240 Patients 1958	Injection† 240 Patients 1968
Increased appetite with weight gain	26	2
Nervousness	23	14
Moon facies	18	0
Gastrointestinal distress	17	4
Insomnia	12	5
Fatigue	5	1
Depression	5	2
Muscle pain	5	4
Edema	1	0
Headache	3	3
Increased motor activity	0	1
Ataxia	0	2
Acne	0	1
Nystagmus	0	1
Patients reporting no side effects	168	217

*Decadron Tablets

†Decadron Phosphate Injection

Topical Therapy for the Nose

Until dexamethasone phosphate (Turbinaire Decadron Spray) became available, I was disappointed in the results from the more poorly absorbed preparations. The Drug Committee of the American Academy of Allergy,[6] in a double blind cross-over study, showed positive objective results in nasal potency, rhinorrhea, and pruritus in the treatment of nasal polyps when compared to treatment with a placebo. It is also useful in weaning patients from nose sprays.

Topical Therapy for the Lungs

The early dexamethasone phosphate (Re-

*Not commercially available in USA.

sihaler Decadron) showed some efficacy but definitely had systemic side effects. Although it is still available, it has never been widely used. Newer, more poorly absorbed aerosolyzed sprays are beclomethasone dipropionate (Vanceril, Schering), flunisolide,* and triamcinole acetonide.*

Beclomethasone dipropionate shows great promise. If only half the claims of investigators presented at the two national allergy meetings in the spring of 1976 are true, the preparations may become extremely important in treating chronic steroid-dependent asthma patients.

The chief claims are efficacy, lack of significant side effects, and best of all, no significant adrenal suppression. In fact, patients with suppressed adrenals had a slow return to normal function. Of course, sprays are useful only for maintenance, not an acute attack. A return of allergic rhinitis and occasional moniliasis of the throat were reported. Episodes of acute asthmatic bronchitis still need antibacterial and systemic corticosteroid treatment. The slowness of the FDA in approving beclomethasone dipropionate for use in the United States has been deplored.[7]

Topical Therapy for the Eye

Great success in treating contact dermatitis of the lids and allergic conjunctivitis with topical corticosteroid preparations has been reported. However, the dangers of increasing viral infections such as herpes and of cataract formation are very real. Since times and courts have changed, so has my mode of practice. In spite of the fact that in 15 years I have had no significant problems, I now feel better in referring such patients to an ophthalmologist.

Conclusion

The latter part of my 25-year experience with corticosteroid therapy has made me much more cautious. I now consider the long-term import such as hypothalamic-pituitary-adrenal suppression and lack of proper allergy management to be of primary importance. Probably legitimate problems for the institution of corticosteroid therapy are poison ivy, acute drug allergies, and status asthmaticus.

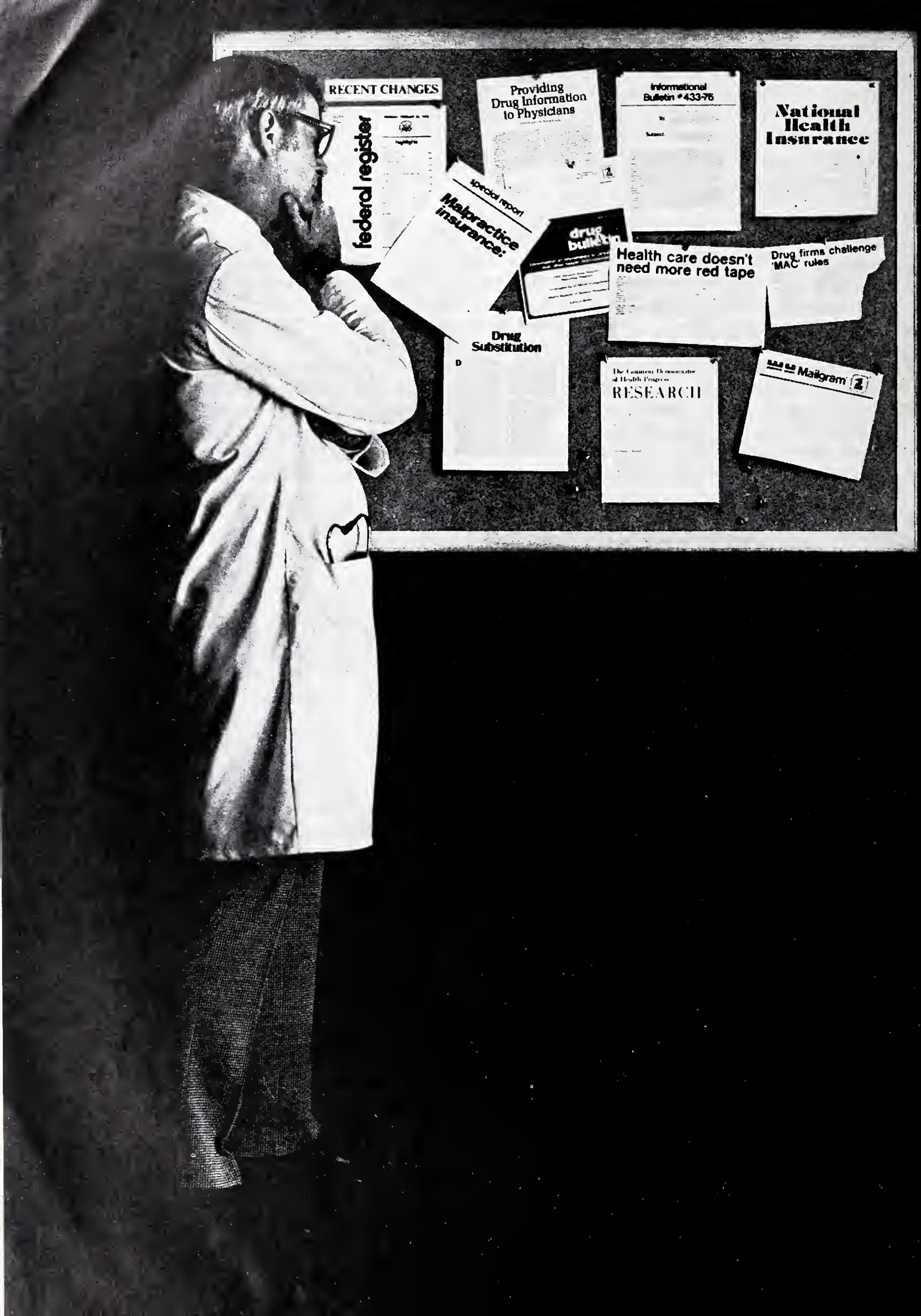
Corticosteroids have indeed changed the practice of allergy. Any drug therapy that works so effectively on the symptoms is bound to have significant side effects. Each cortisol derivative varies in antiallergic activity and duration of action. A physician must be cognizant of both the multiple beneficial effects and the detrimental side effects in order to best help the patient he is treating.

References

1. Grater WC: Corticosteroid choice in allergy. Ann Allergy 21:454-465, 1963.
2. Drug Committee of the Research Council of the American Academy of Allergy: Side effects of prolonged corticosteroid treatment in patients with asthma. J Allergy 40:88-92, 1967.
3. Grater WC: Parenteral dexamethasone phosphate in allergy. South Med J 53:1144-1146, 1960.
4. Lee SS, Rapp Y: The modern topical steroids. Int J Dermatol 14(6):412-421, 1975.
5. Stevanovic DV: Corticosteroid-induced atrophy of the skin with telangiectasia: a clinical and experimental study. Br J Dermatol 87:548-556, 1972.
6. Drug Committee of the Research Council of the American Academy of Allergy (NY): A double-blind labeled study of dexamethasone nasal aerosol vs placebo in the treatment of nasal polyposis. J Allergy 41:10-13, 1968.
7. Clark TJ: quoted in *Medical Tribune* vol 16, no 40, Nov 12, 1975.

Dr. Grater, 8226 Douglas Ave, Dallas, TX 75225.

*Not commercially available in USA.


RECENT CHANGES
federal register
Providing Drug Information to Physicians
Informational Bulletin # 433-76
National Health Insurance
special report
Malpractice insurance:
drug Bulletin
Health care doesn't need more red tape
Drug firms challenge 'MAC' rules
Drug Substitution
RESEARCH
Mailgram

THERE ARE A LOT OF PEOPLE GETTING BETWEEN YOU AND YOUR PATIENT.

Medicine today is in the spotlight, subjected to all kinds of scrutiny. Your control over patient therapy is being monitored, judged and occasionally abrogated, sometimes by unknown third parties.

The worry is that in the wake of this focus, the relationship between you and your patient will be weakened, without offsetting benefits. Consider three examples:

Drug substitution In most states, pharmacy laws, regulations or professional custom stipulate that your non-generic prescriptions be filled with the precise products you prescribe. But in the last five years, a dozen or more State laws have been changed, permitting the pharmacist in most cases to select a product of the same generic drug to fill any prescription.

Ironically, this dilution of physician control has taken place against a background of growing evidence that purportedly equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA itself says it has not enforced the same standards for hundreds of "follow-on" products that it had applied to the original NDA approvals. Thus physician control over patient therapy is being eroded with a risk that patients may be exposed to drugs of uncertain quality.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant savings has been produced.

MAC Maximum Allowable Cost, MAC for short, is a Federal regulation designed to cut the Government's drug bill by setting price ceilings for drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the Government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right. Practicing doctors will have little to say about administration of the program, since Government will have absolute authority to make its choices stick.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to your patients: The cost of the research is more than ten times what it was, per product, in 1962; and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present approval process contributes to needless delay of needed therapy. That's why the increased efficiency of the drug approval process is vital to all our futures.

If these issues concern you, we suggest that you make your voice heard—among your colleagues and your representatives in State legislatures and in Washington.

It could make a difference in your practice tomorrow.

P·M·A
Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

Information for authors

Texas Medicine is a scientific, clinical journal published primarily for members of the Texas Medical Association. In addition, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, coming meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Scientific Articles

Manuscripts should be typed double-spaced with ample margins on firm paper. Two copies should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

References

Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrative Material

Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously Published Material

Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with the manuscript.

Editorials

Editorials should be prepared in the same general manner, and should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the Managing Editor and consultants.

News

News items should be sent to the Editorial Offices, 1801 North Lamar Blvd., Austin 78701.

Continuing Education, Meetings

Continuing education courses and medical meetings are listed in each issue. Information about courses should include title, sponsor, location, dates, duration, fee, how many may enroll, for whom the course is designed, teaching methods, type and number of hours credit, and name and mailing address of a person to contact.

Information about meetings should include the name of the organization, place and inclusive dates, and name and mailing address of a person to contact. Program topics and names of speakers may be included as space permits.

Material should be submitted in writing six weeks before publication; for example, information for the June issue (published June 1) is needed by April 15.

Obituaries

Obituaries of deceased TMA members are published if adequate information is received within four months of date of death. When notifying the editors of a member's death, please give the name and address of next of kin.

Policy on Columns

Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Scientific Publication Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the Committee and the editors will consider development of a column.

Editing

All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints

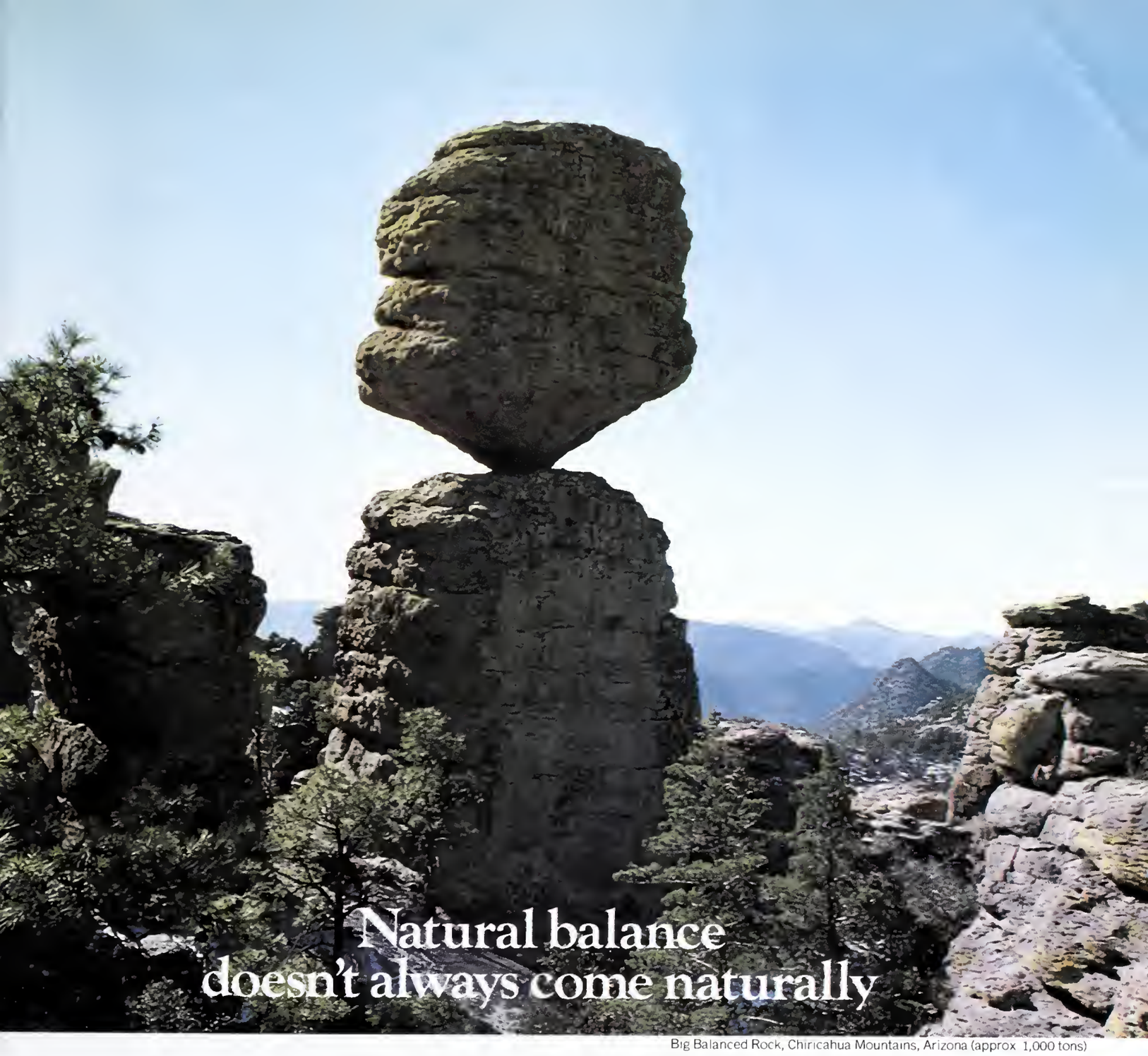
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright

Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the Managing Editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

Point of View

Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.



Big Balanced Rock, Chiricahua Mountains, Arizona (approx 1,000 tons)

■ **Most Widely Prescribed**—Antivert is the most widely prescribed agent for the management of vertigo* associated with diseases affecting the vestibular system such as Menière's disease, labyrinthitis, and vestibular neuronitis.

■ **Relief of Nausea and Vomiting**—Antivert/25 can relieve the nausea and vomiting often associated with vertigo.*

■ **Dosage for Vertigo*** —The usual adult dosage for Antivert/25 is one tablet t.i.d.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

DYAZIDE®

Trademark

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE FOR LONG-TERM CONTROL OF HYPERTENSION*

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* WARNING
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the fixed combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium-sparing action of its 'Dyrenium' component is warranted.

Contraindications: Further use in progressive renal or hepatic dysfunction; hyperkalemia. Preexisting elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs. Routine use of diuretics in otherwise healthy pregnancy.

Warnings: **Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired.** If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in severely ill patients with urine volume less than one liter/day, the elderly or diabetics, with suspected or confirmed renal insufficiency. Periodic determinations of serum K^+ should be made. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **The presence of a widened QRS complex or arrhythmia in association with hyperkalemia requires prompt additional therapy.** Thiazides are reported to cross the placental barrier and appear in breast milk; fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and other adverse reactions that have occurred in the adult may result. When used in pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics, or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium® (triamterene, SK&F Co.), and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Do periodic blood studies in cirrhotics to check for nondrug-related variations in blood pictures, and in patients with folic acid depletion, since 'Dyrenium' may contribute to appearance of megaloblastosis. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

SK&F CO., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

consider the effect on coexisting diabetes when you prescribe a vasodilator*

(POSTERIOR VIEW OF PANCREAS)

no interference in the management of the diabetic patient has been reported with

VASODILAN® (ISOXSUPRINE HCl)

the compatible vasodilator TABLETS, 20 mg.

*__Indications__: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

Mead Johnson LABORATORIES

© 1977, MEAD JOHNSON & COMPANY, EVANSVILLE, INDIANA 47721 U.S.A. MJL5-4117R1

Neutrophil functions and defects

Armond S. Goldman, MD

Eli Metchnikoff,[1] the famed Russian biologist, predicted in the 19th century that phagocytes would be demonstrated to be important in host defense. That prophecy proved to be correct in respect to both major types of phagocytes, the neutrophils or polymorphonuclear leukocytes and mononuclear phagocytes, as the mechanisms of action of these cells have become clarified during the past few decades.

The purpose of this article is (1) to review some of the work which elucidated the functions of one of the major types of phagocytes, the neutrophils; and (2) to present the disorders which arise as a consequence of defects in the function of these cells. In doing so, I will attempt to show that an understanding of the functions of these cells has led to the discovery of their disorders.

Production and Function

Approximately 1.26×10^9 neutrophils are produced daily in the human bone marrow[2] from precursors that originate from pleuripotent stem cells.[3,4] The agents that induce stem cells to differentiate into myeloid precursors are not identified, although some factors that influence the proliferation and maturation of these precursor cells have been found. For example, a glycoprotein isolated first from urine has been found to stimulate the *in vitro* growth of granulocytic colonies.[5] This colony stimulating factor is produced by the other principal phagocytes, monocytes and macrophages.[6,7] A negative feedback system by which mature granulocytes inhibit granulopoiesis has been suggested.[8,9] Indeed, it has been recently demonstrated that unusually dense leukocytes which are probably mature neutrophils inhibit the release of colony-stimulating factor from monocytes cultured *in vitro*.[10] In addition, certain prostaglandins may inhibit the formation of these maturational factors.

In contrast to mature neutrophils, immature myeloid cells are sessile and nonphagocytic. During their maturation in the bone marrow, their mitochondria decrease, glycogen stores increase and glycolysis becomes the principal source of energy. These metabolic alterations prepare the cells to operate in oxygen-poor environments such as are found in infected, inflammatory sites.

Mature Neutrophils

Neutrophils display two main morphologic characteristics—a segmented nucleus and two types of cytoplasmic granules. The larger primary granules are assembled early in maturation and contain lysosomal hydrolases, cationic proteins, and myeloperoxidase.[11] The smaller specific granules appear later in maturation and have a high content of alkaline phosphatase, lysozyme, and lactoferrin.[11,12] The fusion of neutrophil granules with the external limiting membrane of the cells is thought to be prevented by a barrier of microfilaments which lie beneath the plasmalemma. The dissolution of this barrier and the subsequent extrusion of the granules (degranulation) appear to be enhanced by a fragment of the fifth component of complement, C5a.[13]

Circulation and Deployment

Each day billions of mature neutrophils leave the bone marrow to enter the peripheral blood. Whereas a number of days are required in the bone marrow for the maturation of neutrophils, their life span in the blood is only six or seven hours.[2] Somewhat more than half of the neutro-

phils in the blood are adherent to the endothelium of blood vessels, principally in the lung.[14] These marginated cells are in equilibrium with freely circulating neutrophils. Demargination is greatly enhanced during physiologic stress such as exercise, as a consequence of inflammation, or after administration of epinephrine.[2] The phagocytic functions of these demarginated cells appear to be somewhat less efficient than freely circulating blood neutrophils.[15]

The mechanism of neutrophil adherence is largely unknown. Divalent cations and glycolysis are essential,[16] whereas cyclic adenosine monophosphate reduces the ability of leukocytes to be adherent.[17] Ethanol, salicylates, and glucocorticoids may directly or indirectly interfere with the adherence of granulocytes.[18]

Motility

Because of their exceptional motility, neutrophils are the first leukocytes to enter inflammatory sites. The motility of these cells is dependent upon the contractile proteins, actin polymers, and myosin, which are found in the microfilaments and adenosine triphosphate. In addition to random motility, neutrophils also display directed motility in that they are attracted vectorially to increasing concentrations of certain chemical compounds. The process is called chemotaxis and the attractants are termed chemotactic agents. Chemotactic agents[15] include bacterial products, collagen fragments, fibrin, the kinin generating enzyme (kallikrein), a fragment of the third component of complement (C3a), C5a, and a factor from T lymphocytes. There is evidence that neutrophil chemotaxis is dependent upon microtubules,[21] but the functional relationship between those organelles and microfilaments which contain contractile proteins is unknown.

Recognition—Phagocytosis

Mature neutrophils have remarkable phagocytic activities, but they have difficulty in ingesting certain microorganisms, particularly encapsulated ones. The ingestion of these and other organisms may be facilitated by natural defense factors called opsonins, which alter the physiochemical surface of the particle to be captured. Opsonins include specific IgG or IgM antibodies to the foreign agent and C3b, a fragment of the third component of complement.[22] In addition, a spleen-produced tetrapeptide, tuftsin, which binds to IgG and is leukophilic,[23] may play a role in the facilitation of the recognition step in phagocytosis.

Ingestion usually, but not invariably, follows the attachment of the particle to the surface of the neutrophil. Upon adherence, glycolysis is activated to provide intracellular energy for phagocytosis. Microfilaments and microtubules appear to play a role in ingestion, but the details are lacking. After attachment, pseudopodia extend and then fuse to surround the particle in an endocytic vesicle, the phagosome. As a result of extensive phagocytosis, surface membrane receptor sites for particles are internalized. When these sites are entirely consumed, phagocytosis ceases.

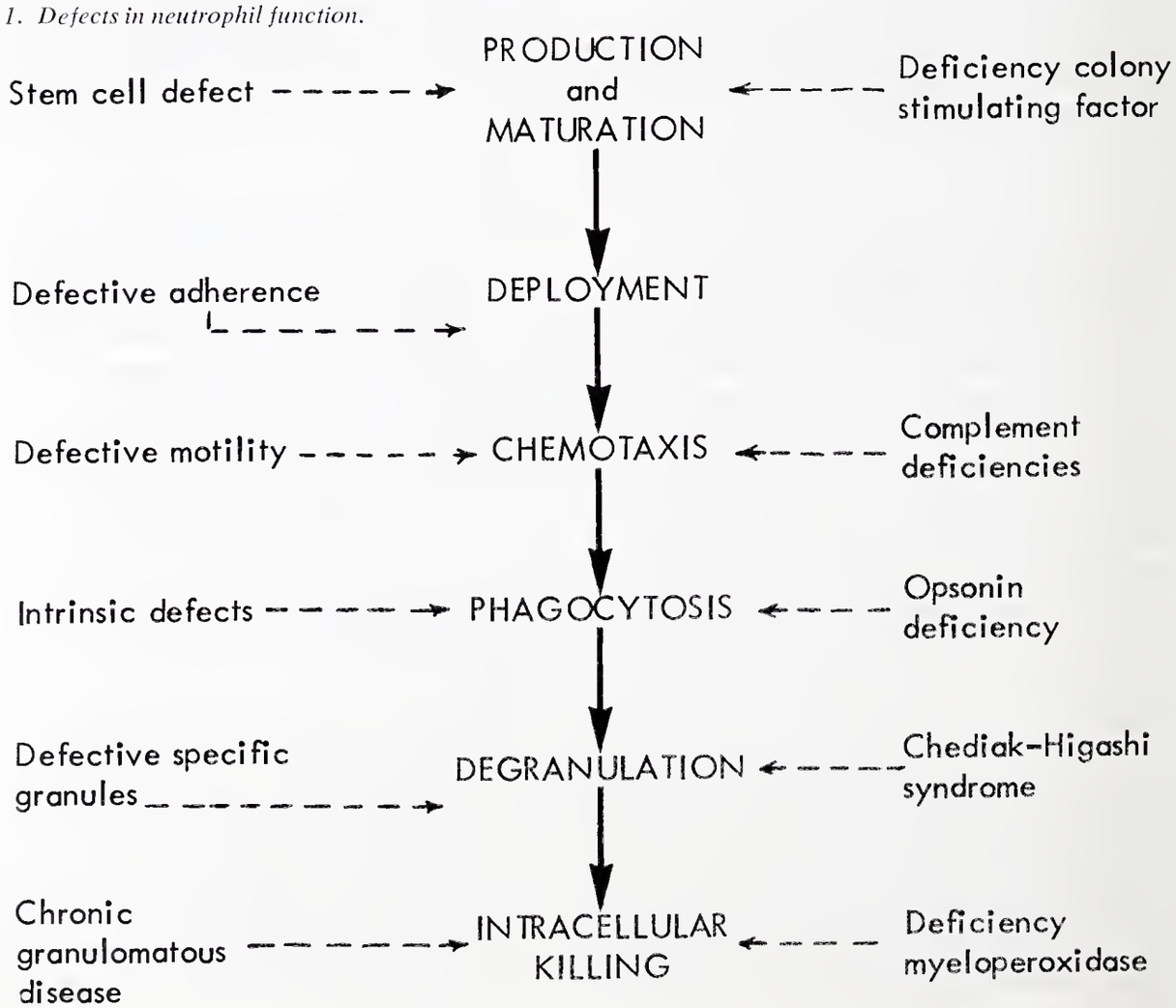
Phagosomes merge first with specific granules and then with primary granules to form phagolysosomes. In these digestive vacuoles, ingested organisms are chemically attacked. In addition, lysosomes may be extruded into the extracellular space to assault noningested microorganisms. Also as a consequence of phagocytosis,

the direct oxidative pathway, the hexose monophosphate shunt, is stimulated to produce hydrogen peroxide, which acts in concert with myeloperoxidase and chloride or iodide ions as a microbicidal system.[24,25] Also associated with this respiratory burst is the production of superoxide.[26] However, the role of this agent in defense is unclear, and the exact bactericidal mechanisms are as yet unclarified.

Defects in Neutrophil Function (Fig 1)

Usually, an abnormality in neutrophil function leads to an increase in the frequency and severity of bacterial and fungal infections. Indeed, the role of neutrophils in host defense has been illuminated by investigations of defects in their functions. For instance, a critical number of circulating mature neutrophils is essential to defense against many bacteria and fungi of low or high virulence. The concentration of neutrophils in the peripheral blood normally exceeds 1,500/cu mm. Mild degrees of neutropenia (1,000-1,500/cu mm) are usually asymptomatic, whereas severe neutropenias (500/cu mm or less) usually result in serious infections. The degree of neutropenia depends upon the

1. Defects in neutrophil function.



specific disease. For example, the degree of neutropenia is modest in chronic benign neutropenia and severe in the Kostmann-type of congenital neutropenia. In addition, the severity of the clinical consequences of the neutropenia may also depend upon whether there are concomitant defects in other parts of the host defenses.[18]

The pathogenesis of the primary neutropenias has been obscure. The application of newer research techniques, however, should begin to aid in understanding these disorders. For instance, cyclic neutropenia has been associated with cyclic depressions in the production of colony-stimulating factor.[27] Two reports indicate that certain cases of chronic neutropenia are caused by autoantibodies to neutrophils.[28,29] In one report,[28] autoantibodies were directed against the NA2 antigen, a specific neutrophil antigen. In the second report,[29] autoantibodies were detected by their ability to facilitate the phagocytosis of neutrophils by mononuclear phagocytes. Thus, these antibodies were opsonins directed against neutrophils.

Patients with defects in neutrophil motility also present with severe or repeated infections. The defect may be intrinsic to the cells[30] or the result of external agents. In 1974, an intrinsic defect in neutrophil motility was related to an abnormally functioning actin.[31] The neutrophils of patients with diabetes mellitus have an impaired response to chemotactic agents, which is corrected by insulin.[32] Patients with the rare Chediak-Higashi syndrome have defective neutrophil motility as well as other intraneutrophil defects.[33] Defective neutrophil motility may be due to extrinsic factors. It has been observed that circulating preformed chemotactic factors[34] may deactivate neutrophil migration in chemotactic chambers *in vitro*. Naturally occurring serum inhibitors of neutrophil motility may be unmasked by a deficiency of normal plasma antagonist to these inhibitors.[35,36] Finally, dysfunctional[37,38] or deficient[39-41] chemotactic factors or inhibitors[42] of chemotactic factors may diminish neutrophil motility. Researchers have recognized congenital defects in neutrophil adherence which mimic motility defects *in vitro*.[43]

Phagocytic defects have been associated with a deficiency of opsonins. Antibody opsonins may be diminished in the hypogammaglobulinemias. Decreased formation[40] or hypercatabolism[41] of C3 are responsible for low levels of complement opsonins. The increased susceptibility to infection in sickle cell anemia has been ascribed in part to a failure of formation of opsonins from the alternative pathway of complement.[44] Functional asplenia may also play a role in that regard.[45] Newborn infants have diminished serum opsonic activity.[46,47] Deficiency of the leukophilic tetrapeptide, tuftsin, has also been reported to cause defective phagocytosis.[23,48]

Symptomatic defects in primary and specific granules have been reported. In hereditary deficiency of myeloperoxidase,[49] the candidacidal activity of the neutrophils may be reduced. Some of these deficient persons, however, are asymptomatic. In the Chediak-Higashi syndrome, the formation of phagolysosomes (degranulation) is greatly impeded[50] and consequently, the size of the primary granules is greatly increased. In other types of patients, defects in the formation or chemical content of specific granules[51,52] have been recognized. The infections in those individuals were most likely due to a deficiency in intracellular lysozyme and lactoferrin.

The most commonly recognized disorder of intracellular killing is chronic granulo-

matous disease. Affected persons display chronic, destructive infections of the skin, lungs, bones, and other organs. The disease is usually transmitted genetically to males from asymptomatic maternal carriers by an abnormal gene on the x-chromosome, although some autosomal recessive cases have been reported. The basic abnormality has not been discovered, but the pathogenesis is fairly well understood. Following phagocytosis, glucose oxidation is not optimally stimulated,[53,54] possibly because of lack of a critical site on the external membrane of the cell which is required to activate the biochemical pathway. As a consequence, the production of bactericidal agents such as hydrogen peroxide is restricted.[55] In keeping with this observation, patients with this disease are susceptible to organisms such as staphylococci, *Serratia marcescens*, and candida which destroy their own hydrogen peroxide, whereas organisms such as streptococci which lack catalase provide the chemical substrates that are necessary to complete their killing. Another example of a bactericidal defect is a complete deficiency in glucose-6-phosphate dehydrogenase in leukocytes.[56] The resultant oxidative defect is similar to that observed in chronic granulomatous disease, although certain metabolic differences have been observed.

Epilogue

Billions of neutrophils are produced each day from myeloid cells in the bone marrow. The maturation of these cells is enhanced by colony-stimulating factors. When neutrophils enter the peripheral blood, they are highly efficient, motile phagocytes that are rich in lysosomal enzymes, lysozyme, and lactoferrin. Neutrophils are the first leukocytes to enter inflammatory sites. They are attracted by chemotactic agents such as activated complement components; their phagocytic functions are enhanced by opsonins which prepare the particles for ingestion. The energy for phagocytosis is provided by glycolysis. Upon engulfment, phagocytic vacuoles form, which then merge with the cytoplasmic granules. At the same time, the direct oxidative pathway is activated to provide bactericidal agents.

Although neutrophil production or function may be depressed as a result of infection, primary defects may occur in the production, development, or function of neutrophils, and these defects may lead to an increased frequency and severity of infections. Even though these disorders have not been commonly reported, more patients with these defects will be recognized as neutrophil function tests are more widely applied in the practice of medicine. Also, it may be anticipated that new types of defects will be discovered as the ultrastructure and chemical molecules that are responsible for the function of the cells are better understood.

Progress is also evident in the treatment of neutrophil defects. Plasma or plasma products have been helpful in correcting certain chemotactic or opsonic defects. Neutrophil transfusions are being used in the experimental therapy of septic, neutropenic patients. Bone marrow transplantation has been suggested as a potential means of correcting primary neutrophil disorders. The problem of rejection will have to be solved before that is possible, but it is of importance that one patient with chronic granulomatous disease has been successfully treated with a bone marrow transplant.[57] Other therapeutic approaches will certainly emerge as the basic defects

which undergird these disorders are discovered. For instance, neutrophil function in the Chediak-Higashi syndrome improves after treatment with ascorbate.[58]

Since neutrophils play an important role in the pathogenesis of many inflammatory disorders, it is likely that these disorders will also be partly ameliorated by controlling the functions of neutrophils. These are the challenges to the 20th century Metchnikoffs.

This comprehensive review article was prepared for *Texas Medicine* through the cooperation of Edward N. Brandt, MD, Dean, and Michael M. Warren, MD, Chairman, Continuing Education Committee, The University of Texas Medical Branch, Galveston.

References

1. Metchnikoff E: Immunity in infective diseases. London, Cambridge University Press, 1905.

2. Cartwright GE, Athens JW, Wintrobe MM: The kinetics of granulopoiesis in normal man. Blood 24:780-803, 1964.

3. Till JE, McCulloch EA: A direct measurement of the radiation sensitivity of normal mouse bone marrow cells. Radiat Res 14:213-222, 1961.

4. McCulloch EA, Gregory CJ, Till JE: Cellular communication early in haemopoietic differentiation, in: Haemopoietic stem cells. Ciba Foundation Symposium 13. Amsterdam Associated Scientific Publishers, 1973, pp 183-204.

5. Metcalf D: The colony stimulating factor (CSF). Aust J Exp Biol Med Sci 50:547-557, 1972.

6. Golde DW, Cline MJ: Identification of the colony-stimulating cell in human peripheral blood. J Clin Invest 51:2981-2983, 1972.

7. Golde DW, Finley TN, Cline MJ: Production of colony-stimulating factor by human macrophages. Lancet 2:1397-1399, 1972.

8. Rytömaa T: Role of chalone in granulopoiesis. Br J Haematol 24:141-146, 1973.

9. Lozzio BB: Regulators of cell division. A review. I. Endogenous mitotic inhibitors of hematopoietic cells. Exp Hematol 1:309-339, 1973.

10. Baker FL, Broxmeyer HE, Galbraith PR: Control of granulopoiesis in man. III. Inhibition of colony formation by dense leukocytes. J Cell Physiol 86 (2 pt 2 suppl 1): 337-342, 1975.

11. Bainton DF: Origin, content, and fate of PMN granules, in: Williams RC, Fudenberg HH, Eds: Phagocytic mechanisms in health and disease. New York, Intercontinental Medical Book Corporation, 1972, pp 123-133.

12. Baggiolini M, De Duve C, Masson PL, et al: Association of lactoferrin with specific granules in rabbit heterophil leukocytes. J Exp Med 131:559-570, 1970.

13. Zurier RB, Hoffstein S, Weissmann G: Cytochalasin B: effect on lysosomal enzyme release from human leukocytes. Proc Natl Acad Sci USA 70:844-848, 1973.

14. Bierman HR, Kelly KH, Cordes FL, et al: Release of leukocytes and platelets from the pulmonary circulation by epinephrine. Blood 7:683-692, 1952.

15. Stossel TP: Phagocytosis. N Engl J Med 290:717-723, 774-780, 833-839, 1974.

16. Garvin JE: Factors affecting the adhesiveness of human leucocytes and platelets in vitro. J Exp Med 114:51-73, 1961.

17. Bryant RE, Sutcliffe M: The effect of cyclic AMP on granulocyte adhesiveness. Clin Res 21:594, 1973.

18. MacGregor RR, Spagnuolo PJ, Lentnek AL: Inhibition of granulocyte adherence by ethanol, prednisone, and aspirin, measured with an assay system. N Engl J Med 291:642-646, 1974.

19. Tatsumi N, Shibata N, Okamura Y, et al: Actin and myosin A from leucocytes. Biochim Biophys Acta 305:433-444, 1973.

20. Stossel TP, Pollard TD: Myosin in polymorphonuclear leukocytes. J Biol Chem 248:8288-8294, 1973.

21. Caner JE: Colchicine inhibition of chemotaxis. Arthritis Rheum 8:757-764, 1965.

22. Winkelstein JA: Opsonins: their function, identity and clinical significance. J Pediatr 82: 747-753, 1973.

23. Najjar VA, Constantopoulos A: A new phagocytosis-stimulating tetrapeptide hormone, tuftsin, and its role in disease. J Reticuloendothel Soc 12:197-215, 1972.

24. Klebanoff SJ: A peroxidase-mediated antimicrobial system in leukocytes. J Clin Invest 46:1078, 1967.

25. Klebanoff SJ: Iodination of bacteria: a bactericidal mechanism. J Exp Med 126:1063-1078, 1967.

26. Babior BM, Kipnes RS, Curnutte JT: Biological defense mechanisms. The production of leukocytes of superoxide, a potential bactericidal agent. J Clin Invest 52:741-744, 1973.

27. Moore MA, Spitzer G, Metcalf D, et al: Monocyte production of colony stimulating factor in familial cyclic neutropenia. Br J Haematol 27:47-55, 1974.

28. Lelezari P, Jiang AF, Yegen L, et al: Chronic autoimmune neutropenia due to anti-NA2 antibody. N Engl J Med 293(15):744-747, 1975.

29. Boxer LA, Greenberg MS, Boxer GJ, et al: Autoimmune neutropenia. N Engl J Med 293(15):748-753, 1975.

30. Miller ME, Oski FA, Harris MB: Lazy-leucocyte syndrome. A new disorder of neutrophil function. Lancet 1:665-669, 1971.

31. Boxer LA, Headley-Whyte ET, Stossel TP: Neutrophil actin dysfunction and abnormal neutrophil behavior. N Engl J Med 291(21):1093-1099, 1974.

32. Mowat AG, Baum J: Chemotaxis of polymorphonuclear leukoctyes from patients with diabetes mellitus. N Engl J Med 284:621-627, 1971.

33. Baehner RL: Molecular basis for functional disorders of phagocytes. J Pediat 84:317-327, 1974.

34. Mowat AG, Baum J: Chemotaxis of polymorphonuclear leukocytes from patients with rheumatoid arthritis. J Clin Invest 50:2541-2549, 1971.

35. Smith CW, Hollers JC, Dupree E, et al: A serum inhibitor of leukotaxis in a child with recurrent infections. J Lab Clin Med 79:878-885, 1972.

36. Soriano RB, South MA, Goldman AS, et al: Defect of neutrophil motility in a child with recurrent bactericidal infections and disseminated cytomegalovirus infection. J Pediatr 83:951-958, 1973.

37. Miller ME, Nilsson UR: A familial deficiency of the phagocytosis-enhancing activity of serum related to a dysfunction of the fifth component of complement (C5). N Engl J Med 282:354-358, 1970.

38. Jacobs JC, Miller ME: Fatal familial Leiner's disease: a deficiency of the opsonic activity of serum complement. Pediatrics 49:225-232, 1972.

39. Miller ME: Chemotactic function in the human neonate: humoral and cellular aspects. Pediat Res 5:487-492, 1971.

40. Alper CA, Colten HR, Rosen FS, et al: Homozygous deficiency of C3 in a patient with repeated infections. Lancet 2:1179-1181, 1972.

41. Alper CA, Abramson N, Johnston RB Jr, et al: Studies in vivo and in vitro on an abnormality in the metabolism of C3 in a patient with increased susceptibility to infection. J Clin Invest 49:1975-1985, 1970.

42. Ward PA, Berenberg JL: Defective regulation of inflammatory mediators in Hodgkin's disease. Supernormal levels of chemotactic-factor inactivator. N Engl J Med 290:76-80, 1974.

43. Edelson PJ, Stites DP, Gold S, et al: Disorders of neutrophil function. Defects in the early stages of the phagocytic process. Clin Exp Immunol 13:21-28, 1973.

44. Johnston RB, Newman SL, Struth AG: An abnormality of the alternate pathway of complement activation in sickle-cell disease. N Engl J Med 288:803-808, 1973.

45. Pearson HA, Spencer RP, Cornelius EA: Functional asplenia in sickle-cell anemia. N Engl J Med 281:923-926, 1969.

46. Forman ML, Stiehm ER: Impaired opsonic activity but normal phagocytosis in low-birth-weight infants. N Engl J Med 281:926-931, 1969.

47. McCracken GH Jr, Eichenwald HF: Leukocyte function and the development of opsonic and complement activity in the neonate. Am J Dis Child 121:120-126, 1971.

48. Constantopoulos A, Najjar VA, Smith JW: Tuftsin deficiency: a new syndrome with defective phagocytosis. J Pediatr 80:564-572, 1972.

49. Salmon SE, Cline MJ, Schultz J, et al: Myeloperoxidase deficiency. Immunologic study of a genetic leukocyte defect. N Engl J Med 282:250-253, 1970.

50. Wolff SM: The Chediak-Higashi syndrome: studies of host defenses. Ann Intern Med 76:293-306, 1972.

51. Strauss RG, Bove KE, Jones JF, et al: An anomaly of neutrophil morphology with impaired function. N Engl J Med 290:478-484, 1974.

52. Spitznagel JK, Cooper MR, McCall AE, et al: Selective deficiency of granules associated with lysozyme and lactoferrin in human polymorphs (PMN) with reduced microbicidal capacity. J Clin Invest 51:93, 1972.

53. Holmes B, Page AR, Good RA: Studies of the metabolic activity of leukocytes from patients with a genetic abnormality of phagocytic function. J Clin Invest 46:1422-1432, 1967.

54. Baehner RL, Nathan DG: Leukocyte oxidase: defective activity in chronic granulomatous disease. Science 155:835-836, 1967.

55. Curnutte JT, Whitten DM, Babior BM: Defective superoxide production by granulocytes from patients with chronic granulomatous disease. N Engl J Med 290:593-597, 1974.

56. Baehner RL, Johnston RB Jr, Nathan DG: Comparative study of the metabolic and bactericidal characteristics of severely glucose-6-phosphate dehydrogenase-deficient polymorphonuclear leukocytes and leukocytes from children with chronic granulomatous disease. J Reticuloendothel Soc 12:150-169. 1972.

57. The Westminster Hospitals Bone-marrow Transplant Team: Bone-marrow transplant from an unrelated donor for chronic granulomatous disease. Lancet 1:210-213, 1977.

58. Boxer LA, Watanabe AM, Rister M, et al: Correction of leukocyte function in Chediak-Higashi syndrome by ascorbate. N Engl J Med 295:1041-1045, 1976.

Dr Goldman, Division of Immunology and Allergy, Department of Pediatrics and Department of Human Biological Chemistry and Genetics, The University of Texas Medical Branch and Shriners Burns Institute, Galveston, TX 77550.

The hemiblocks: relationship to abnormal axis deviation

Ralph Letteer, MD

Introduction

The fortuitous circumstance that prompted this article was the observation of a striking, transient, abnormal deviation of the electrical axis, associated with an episode of spontaneous angina pectoris, during the production of an electrocardiogram (ECG).

The rediscovery of certain observations and insights by some of the pioneer investigators, plus significant contributions by such workers as Ashman and Hull in 1937,[1] Moll and Lutterotti in 1951,[2] and Grant in 1956,[3] furnishes the background for our understanding of abnormal axis deviation. Most recently, the investigations of intraventricular conduction by Rosenbaum and associates,[4,16,19,20] with the concept of hemiblocks of various degree and combination in a trifascicular conduction system, make it appropriate to further review the development of our knowledge of the factors which influence the direction of the electrical axis. Most importantly, these latter workers have presented additional evidence that factors other than ventricular mass and electrical position have a determining influence on the direction and magnitude of the electrical axis.

History

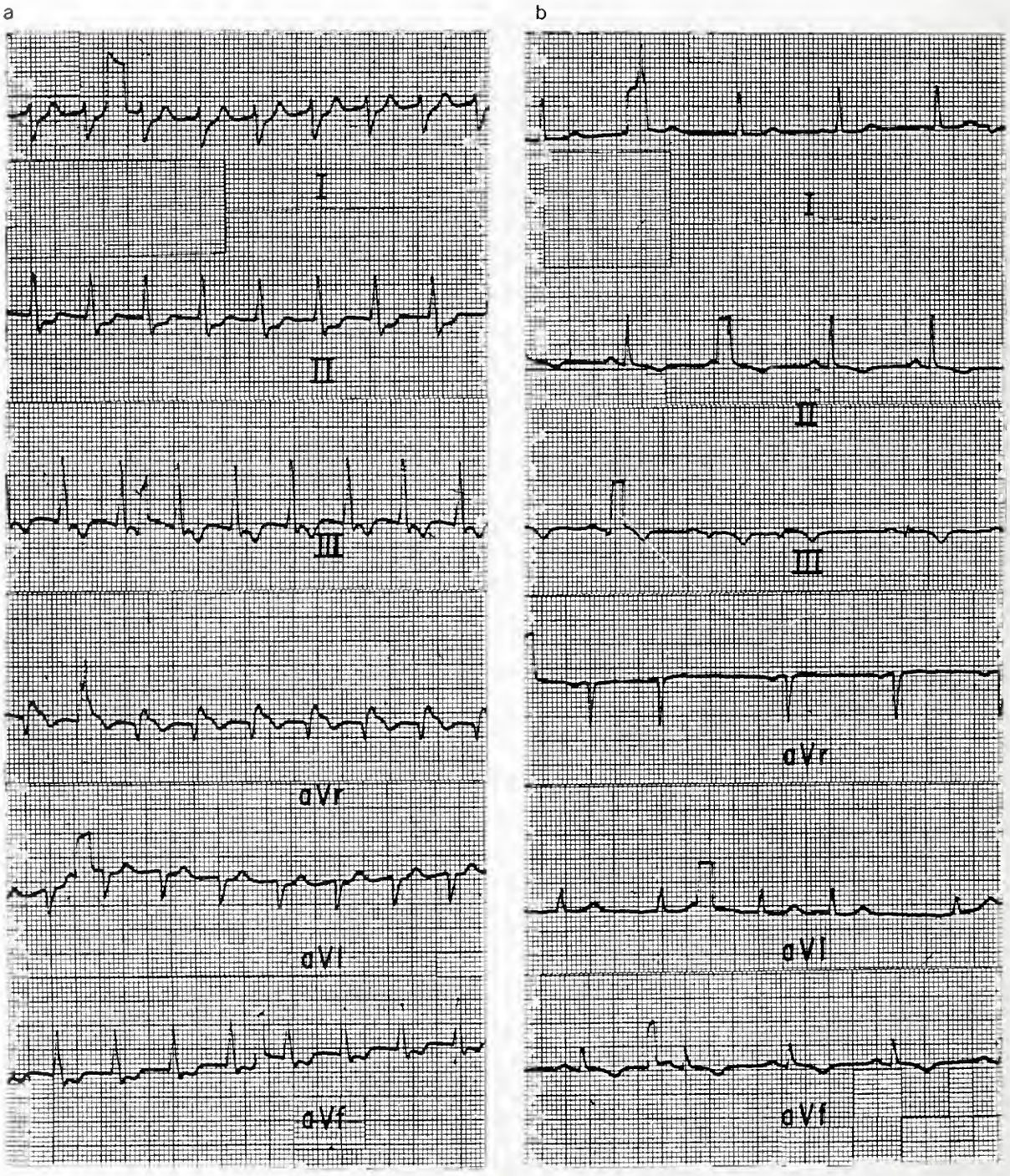
In 1856 it was known that the contraction of the heart muscle was accompanied by the production of an electrical current.[5] In 1887 Waller demonstrated that this current could be led off from the surface of the body and recorded.[6] This was done with a capillary electrometer, but this instrument was too inaccurate to be of practical use. In 1903 Einthoven described his string galvanometer,[7] and in 1906 published reports of his first clinical studies.[8] In 1910 the instrument first came into use in the United States.

Beginning with Einthoven in 1906, interpreters of ECGs have been intrigued with the meaning of the variations in the direction and magnitude of the deflections induced by ventricular depolarization. Einthoven himself denoted and measured these variations in terms of geometric degrees of deviation from the horizontal axis. This method, because of the absence of a general and precise understanding of the significance of the electrical axis, and therefore, lack of practical value in the employment of the concept, has unfortunately fallen into disuse by many modern interpreters.

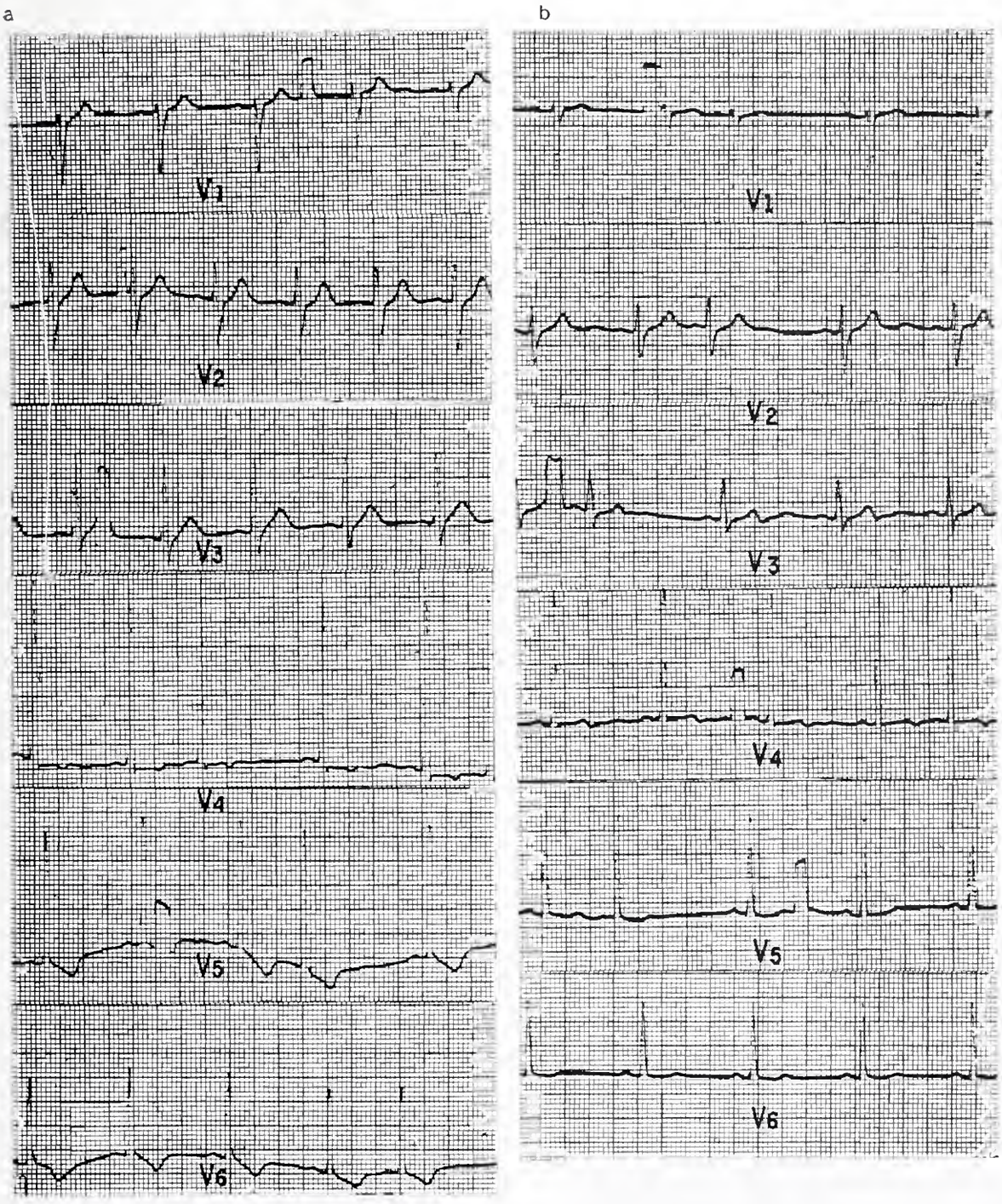
Case Report

The patient, a 62-year-old white man, was referred by an insurance company for evaluation of disability allegedly resulting from heart disease.

While his ECG was being made, the patient exclaimed to the technician that he was having severe chest pain and asked permission to take an Isordil tablet which he carried. Permission was granted, the pain subsided, and production of the ECG was resumed. At the moment, it was thought that this behavior might have been contrived to support a claim for disability insurance. Next, an interview and physical examination were carried out. Though normally intelligent, the patient described his symptoms in vague terms. It became apparent quickly, however, that he had had angina pectoris, induced by minimal physical exertion, relieved by nitroglycerine, and occurring up to three or more times per day since an acute posterior infarction which had occurred 4½ years pre-



1. The limb leads (a) during angina pectoris and hemiblock, and (b) immediately after the first precordial leads and the subsidence of pain.



2. The precordial leads (a) immediately after subsidence of pain, and (b) during completion of the second ECG.

viously. He had never received cardiotropic or antiarrythmic drugs nor had any episodes of identified rhythm disorder. Available data validated the occurrence of the infarction. Prior to the infarction, he had always been perfectly well. The further history and findings of the physical examination were noncontributory to the present discussion.

It is evident from inspection (Fig 1a) that the mean electrical axis during the episode of angina was at about +120°, and that there was a tachycardia with unvarying cycle length and absence of identifiable P waves at a ventricular rate of 130. On the abrupt cessation of the tachycardia between leads AVF and V1 (presumed to have been paroxysmal junctional tachycardia) and resumption of sinoatrial rhythm at a rate of 78, together with subsidence of the anginal pain, the electrical axis reverted from +120° to +30° (Fig 1b). The precordial leads are exhibited in Fig 2a, the first tracing, and 2b, the second tracing; both were recorded after reversion to a normal electrical axis.

It is of critical importance to note that chest films by two independent radiologists, at 4 months and 45 months after the patient's infarction, were reported as showing no skeletal abnormalities, no evidence of pulmonary disease, and no abnormality of heart size or configuration. Further, no prior or subsequent ECG ever showed evidence of right ventricular hypertrophy, a vertical heart, or any abnormal mean frontal plane QRS axis. Many previous ECGs, as late as seven months before the event described, showed a normal axis at +30°, the classical residua of a posterior infarction in the limb leads, and normal ST-T deflections in the precordial leads. Four months after this single observation the patient was found dead on his bathroom floor. Postmortem examination was not performed. While several mechanisms of death are possible, it appears highly probable that he succumbed to an episode of complete heart block that represented a still more advanced form of defective intraventricular conduction.

This case appears to present all of the necessary criteria, elucidated by Rosenbaum, for the diagnosis of right bundle branch block with left posterior hemiblock. These are (1) a mean QRS direction at approximately +120°, and (2) an S_1 Q_3 pattern in the absence of right ventricular hypertrophy or a vertical frontal plane axis. Strong support of the diagnosis is given by the presence of tall R waves in leads II and III.

Rosenbaum identified 29 cases of this disorder in more than ten years. He states that it is the least frequent of all intraventricular conduction disorders.[16]

Discussion

Lewis[10] in 1914 referred to Einthoven's "sign of left preponderance" and "sign of right ventricular preponderance." Einthoven had stated in 1906[8] that certain variations in the "form" (axis) of the ECG result from "hypertrophy of the right or left ventricle, respectively." The axis of the former consisted, roughly, of the major deflections being negative in lead I and positive in lead III (ie, right axis deviation); and of the latter, positive in I and negative in III (ie, left axis deviation).

Lewis had frequently observed patients who showed the physical signs of mitral stenosis and failed to show the electrocardiographic "sign of right ventricular preponderance." Also, he had observed

patients with aortic valve disease who frequently failed to show the "sign of left sided preponderance." Thus, to Lewis, there was a disconcertingly frequent discordance between the physical signs and the ECG signs of both right and left sided heart disease.[10]

Based on his extensive experience as a clinical cardiologist and at postmortem examinations, Lewis believed that "inspection of the heart in the fresh state provides a very imperfect measure of the degree of hypertrophy of the muscle and of its relative excess in one or the other chamber."[10] He believed that there was scant, if any, scientific basis for the establishment of a direct relationship between unilateral hypertrophy of a ventricle and the form of the ECG. He, therefore, set about to examine the hypothesis in a clinicopathological project of major proportion. The pathological observations were initiated by meticulous dissection, preparation, and weighing of the mass of the right and left ventricular muscles, exclusive of the interventricular septum. He applied this methodology to some 80 cases of hypertrophy of the heart.

Lewis concluded that "such physical signs as are customarily utilized at the bedside to differentiate left from right hypertrophy have little or no scientific value." He stated: "many of the latter (ie, physical signs) are unquestionably worthless for exact work." He further concluded that, though there were many exceptions, the electrocardiographic axis did bear some relationship to either right or left ventricular hypertrophy that "lent distinct support to Einthoven's views."[10]

In 1920, Wilson and Herrmann, having noted that the attention of electrocardiographers to the analysis of the cardiac irregularities was approaching exhaustion, turned their attention to the then recent contributions on those abnormalities of the ventricular complex which indicate disturbances of intraventricular conductivity.[11] They recognized that in 1909 Eppinger and Rothberger,[12] on injecting silver nitrate into the ventricular muscle and into the interventricular septum in dogs, had produced striking changes in the form of the ventricular complexes, and had suspected that differences in the form between the two areas "was due to injuries of the larger branches of the conducting system, which lie beneath the septal endocardium."[11] Further, in a second series of experiments, Eppinger and Rothberger confined their attention to these special tissues and, by introducing a small knife, they were able to sever the right and left branches of the bundle of His, thus producing ventricular complexes of the bundle branch type.[13]

While the experiments were in progress, these investigators were looking for clinical cases, and Eppinger and Stoerk reported five in 1910.[14] Two of the five died in the hospital; in each case the diagnosis was right bundle branch block. "At the necropsies, very careful macroscopic and microscopic examinations of the branches of the His bundle were made and in both instances lesions were found completely transecting the right branch while the left branch was normal."[14] This was the first clinicopathological observation and correlation on bundle branch block in the human that had been recorded up until 1920.[11] It is of great interest that Wilson and Herrmann,[11] referring to the bundle of His, stated that "the right branch passes to the chief papillary muscle of the right ventricle as a single strand while the left branch subdivides almost at once spread-

ing out into a broad fan so that it can hardly be completely divided, except by a relatively large lesion." This appears to be the first identification in the American literature that the left bundle branch divides into two subdivisions, an anatomical fact that was totally neglected until it was re-identified, evidently by Rosenbaum, beginning in about 1950. According to Rosenbaum,[16] Eppinger and Rothberger[13] identified or referred to the subdivisions as being "anterior" and "posterior" in 1910, and many others subsequently did so.

Alluding to the work of Einthoven and Lewis, and believing that further investigation of a larger number of cases might produce a more precise understanding of the relationship between right or left ventricular hypertrophy and abnormal axis deviation, Herrmann began a massive clinicopathological study in 1920.[15] Herrmann was cognizant at this time that Rothberger and Winterberg[17] had "shown that section of the anterior subdivision of the left bundle branch in the dog produces curves not unlike curves of left ventricular preponderance in man (ie, left axis deviation); section of the posterior subdivision of this branch produces curves of more or less opposite types."[15] Rosenbaum, in his elucidation of the trifascicular blocks, introduced the terms left anterior hemiblock and left posterior hemiblock to denote those patterns which previously had often been referred to as left or right axis deviation or ventricular hypertrophy. The close, if not exact, relationship of abnormal left axis deviation and left anterior hemiblock and abnormal right axis deviation and left posterior hemiblock is quite evident. Herrmann's method of pathological observations was virtually identical to that employed by Lewis. The scope of the clinical cases was somewhat different in that it included a number of patients who were not affected with heart disease. There were highly detailed and meticulous comparisons of the relationships between the weights of the individual ventricles and the magnitudes and directions of the components of the QRS complexes in each of some 60 cases.[15]

The conclusions arrived at by Herrmann show such prescience as to be worthy of quoting verbatim:[15,18]

1. The relative weights of the two ventricles is but one of many factors which influence the form of the ventricular complex of the electrocardiogram.
2. The chief factors which disturb the relationship between the form of the electrocardiogram and the relative weight of the two ventricles are: (a) variations in the position of the heart, (b) variations in the arrangement of the ventricular conducting system, and (c) *disturbances of intraventricular conduction.*
3. The form of the normal EKG is not determined by the relative weight of the two ventricles; it is chiefly dependent upon the position of the heart and upon the arrangement of the ventricular conducting system.
4. EKG abnormalities cannot be interpreted in the terms of anatomical lesions. A normal EKG does not necessarily mean normal heart muscle. There are many cases of severe heart muscle abnormality in which the EKG is normal.

It should be reiterated that Herrmann was never convinced that abnormal axis deviation bore a direct relationship to ventricular hypertrophy, and he repeatedly propounded the proposition that such could be due to *"disturbances of intraventricular conduction."*

Parenthetically, it should be noted that in 1944, White[21] stated that the terms "*abnormal* left and right axis deviation" were better than "left and right ventricular

preponderance" because "they are more accurate as to what an electrocardiogram reflects, and because the latter terms are sometimes incorrect." It is obvious that the same reasoning applies to the use of the terms "left" or "right ventricular hypertrophy," expecially when this is based alone on the deviation of the electrical axis.

Conclusions

Virtually every form for reporting the interpretation of ECGs retains a space for noting the electrical axis. Many interpreters make an entry such as normal, or left or right. The latter two are without meaning. It would be more appropriate to require a meaningful statement as to the magnitude and direction of the electrical axis. Only then is one in a position to assess the presence or absence of the several types of blocks in the trifascicular conducting system as elucidated by Rosenbaum.

Some degree of deviation, either to the right or left of 0°, is present and normal in perhaps 75% of ECGs of either normal or abnormal pattern. An axis of −45° or more to the left or +100° or more to the right is in the area of a necessary criterion for the diagnosis of left anterior hemiblock or left posterior hemiblock, respectively. It is quite clear that axis deviation may be within a normal range, or that it may be in a range which clearly denotes evidence which may be suggestive of potentially serious cardiac abnormality. The etiologic and prognostic significance is in the order of that which attaches to the bundle branch blocks. According to Rotmon and Triebwasser,[22] in comparison with other types of intraventricular blocks, a higher number of patients (Scanlon:[23] 21% of 24 patients; Rosenbaum:[24] 75% of 28 patients) with right bundle branch block and left posterior hemiblock are at risk for developing complete heart block. This prognostic relationship probably is valid where these two types of blocks coexist persistently or intermittently.

Summary

Basic anatomical facts, upon which the mean frontal plane QRS axis of the ECG are dependent, were discovered and described by Eppinger and Rothberger in 1910. These facts were accepted and incorporated into the thinking of Wilson and Herrmann. Subsequently, a few investigators, though evidently not aware of the anatomical division of the left bundle branch, presented strong evidence that abnormal axis deviation was not necessarily related to hypertrophy of the ventricular musculature. In 1950, Rosenbaum, while seeking an explanation of the electrocardiographic syndrome now known as right bundle branch block with intermittent left posterior hemiblock, incorporated all of the evidence which now culminates in the confirmation of Herrmann's suppositions that axis deviation of abnormal degree results from disturbances of intraventricular conduction, and is not related to ventricular hypertrophy per se. It is probable that when left ventricular hypertrophy and an abnormal axis deviation coexist, the deviation is not directly due to the hypertrophy but rather to disease which affects intraventricular conduction.

Acknowledgments

Michael K. Longo, Jr., MD, Chief of Cardiopulmonary Research, School of Aerospace

Medicine, Brooks Air Force Base, San Antonio, reproduced the electrocardiograms, reviewed the text, and suggested revisions.

References

1. Ashman R, Hull E: Essentials of electro-cardiography for the student and practitioner of medicine. New York, Macmillan Co., 1937.

2. Moll A, von Lutterotti M: Die Beurteilung des "Kiskrepanztypus der R-Zacke," (r_1S_2-S_3-Bild des EKg), Ztschr Kreislaufforsch 40:737-747, 1951.

3. Grant RP: Left axis deviation; electrocardiographic-pathologic correlation study. Circulation 14:233-249, 1956.

4. Rosenbaum MB: The hemiblocks: diagnostic criteria and clinical significance. Concepts Cardiovas Dis 39:141-146, 1970.

5. Kolliker A, Muller H: (Title omitted) Verhandl. d. physik - med. Gessellsch. i. Wurzburg 6:528, 1856.

6. Waller AD: A demonstration on man of electromotive changes accompanying the heart's beat. J Physiol 8:229, 1887.

7. Einthoven W: "Ein neues Galvanometer." Annalen der Physik Folge IV 12:1059, 1903.

8. Einthoven W: Le Telecardiogramme. Arch Intern d Physiol IV:132-164, 1906-1907.

9. Sales brochure for the Victor Electrocardiograph, The Victor X-Ray Corp., Bulletin No 275 (not dated, probably about 1930).

10. Lewis T: Observations upon ventricular hypertrophy with especial reference to preponderance of one or other chamber. Heart 5:367-402, 1913-1914.

11. Wilson FN, Herrmann GR: Bundle branch block and arborization block. Arch Intern Med (Chicago) 26:153-191, 1920.

12. Eppinger H, Rothberger J: Zur analyse des elektrokardiogramms. Wein. Klin. Wchnschr 22:1091, 1909.

13. Eppinger H, Rothberger J: Ueber die folgen der durchschneidung der towaraschen schenkel des reizleitungsystem. Ztschr. f. klin. Med 70:1, 1910.

14. Eppinger H, Stoerk O: Zur klinik des elektrokardiogramms. Ztschr. f. klin. Med 71:157, 1910.

15. Hermann GR, Wilson FN: Ventricular hypertrophy. A comparison of electrocardiographic and post-mortem observations. Heart 9:91-149, 1922.

16. Rosenbaum MB, et al: The hemiblocks. New concepts of intraventricular condition based on human anatomical, physiological, and clinical studies. Oldsmar, Florida, Tampa Tracings, Publishers, 1970.

17. Rothberger CJ, Winterberg H: Experimentelle Beitrage zur Kenntnis der reizleitungs - storungens in den Kammern des Sauget ierherzens. Zeitsch. f. d. ges. exper Med 5:264, 1917.

18. Herrman GR: Electrocardiography and cardiac pathology with especial reference to ventricular preponderance. Dissertation for the degree of Doctor of Philosophy in the Graduate School of the University of Michigan, 1923.

19. Rosenbaum MB, Elizari MV, Lazzari JO, et al: Intraventricular trifascicular blocks. The syndrome of right bundle branch block with intermittent left anterior and posterior hemiblock. Am Heart J 78:306-317, 1969.

20. Rosenbaum MB, Elizari MV, Lazzari J, et al: Intraventricular trifascicular blocks. Review of the literature and classification. Am Heart J 78:450-459, 1969.

21. White PD: Heart Disease. New York, Macmillan Co, 1944. p 196.

22. Rotmon M, Triebwasser JH: A clinical and follow-up study of right and left bundle branch block. Circulation 51(3):477-484, 1975.

23. Scanlon PJ, Pryor R, Blount SG Jr: Right bundle-branch block associated with left superior and inferior intraventricular block. Clinical setting, prognosis, and relation to complete heart block. Circulation 42:1123-1133, 1970.

24. Rosenbaum MB: Types of right bundle branch block and their clinical significance. J Electrocardio 1:221-232, 1968.

Dr. Letteer, 730 North Main, San Antonio, TX 78205.

BREATHING WITH COMFORT.

Choledyl – a highly soluble, true salt of theophylline – rapidly relaxes bronchospasm to promote easier breathing. And, gastric discomfort is minimal.

Because Choledyl is more stable...more rapidly absorbed from the G.I. tract than aminophylline.

Available in both tablets and elixir for patients with obstructive lung disease.

Choledyl® (oxtriphylline) Tablets and Elixir CAUTION: Federal law prohibits dispensing without prescription. Each partially enteric coated tablet contains 200 mg or 100 mg oxtriphylline. Each teaspoonful of the elixir contains 100 mg oxtriphylline; alcohol 20%. *Indications.* Choledyl (oxtriphylline) is indicated for relief of acute bronchial asthma and for reversible bronchospasm associated with chronic bronchitis and emphysema. *Warning.* Use in pregnancy – animal studies revealed no evidence of teratogenic potential. Safety in human pregnancy has not been established; use during lactation or in patients who are or who may become pregnant requires that the potential benefits of the drug be weighed against its possible hazards to the mother and child. *Precautions.* Concurrent use of other xanthine-containing preparations may lead to adverse reactions, particularly CNS stimulation in children. *Adverse Reactions.* Gastric distress and, occasionally, palpitation and CNS stimulation have been reported. *Dosage.* Average adult dosage: Tablets – 200 mg, 4 times a day; Elixir – two teaspoonfuls, 4 times a day. *Supplied.* 200 mg yellow, partially enteric coated tablets in bottles of 100 (N 0047-0211-51) and 1000 (N 0047-0211-60); Unit Dose – 200 mg tablets (N 0047-0211-11); 100 mg red, partially enteric coated tablets in bottles of 100 (N 0047-0210-51). Elixir – bottles of 16 fl oz (1 pint) 474 ml (N 0047-0215-16). *Toxicity.* Oxtriphylline, aminophylline and caffeine appear to be more toxic to newborn than to adult rats. No teratogenic effects have been seen. Full information is available on request.

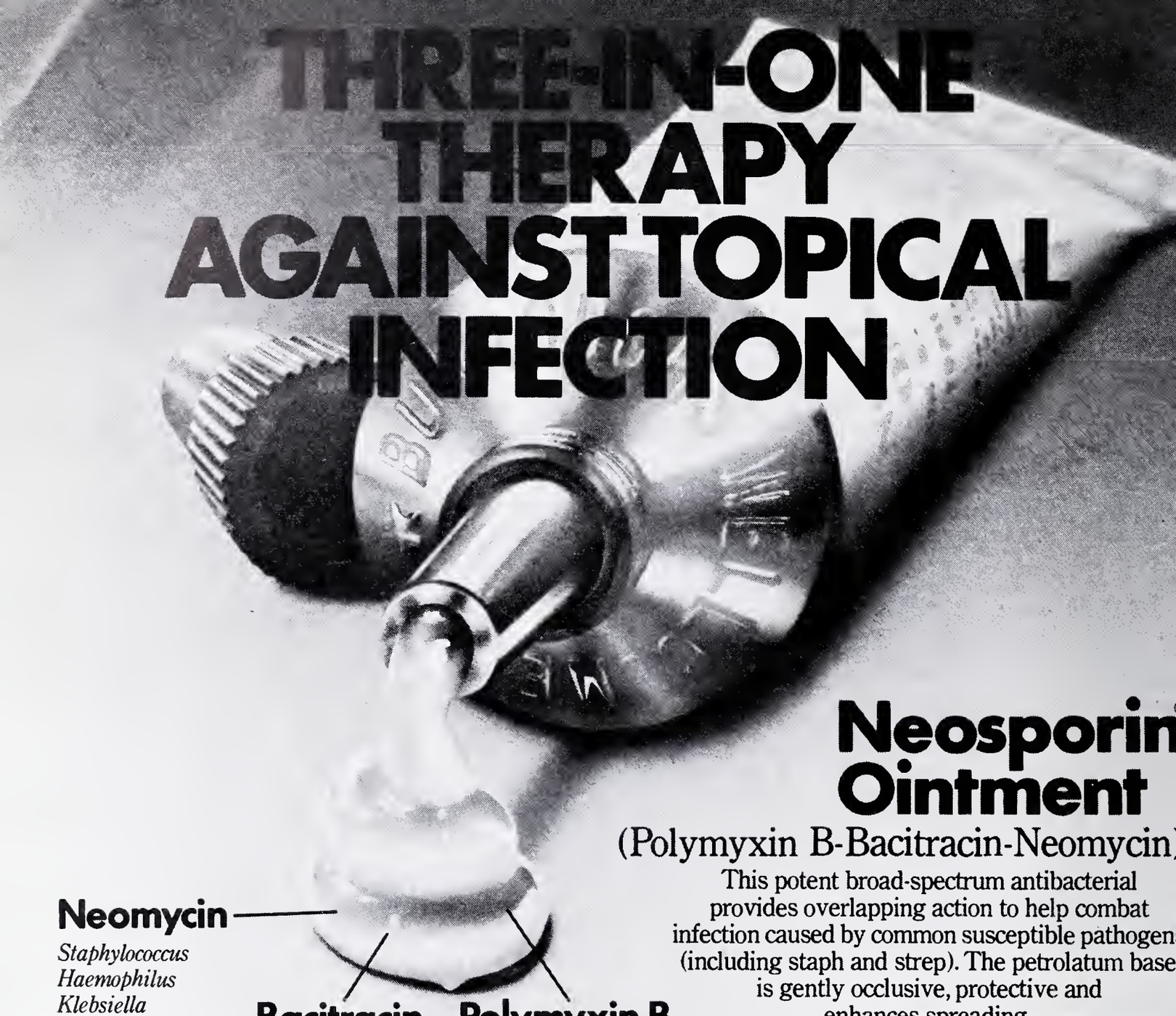
CH-GP-51-4/C

WARNER/CHILCOTT
Division, Warner-Lambert Company
Morris Plains, N.J. 07950

CHOLEDYL® (OXTRIPHYLLINE)

SINGLE-ENTITY
BRONCHODILATION
MINIMAL GASTRIC DISCOMFORT

THREE-IN-ONE THERAPY AGAINST TOPICAL INFECTION



Neosporin Ointment

(Polymyxin B-Bacitracin-Neomycin)

This potent broad-spectrum antibacterial provides overlapping action to help combat infection caused by common susceptible pathogens (including staph and strep). The petrolatum base is gently occlusive, protective and enhances spreading.

Neomycin

Staphylococcus
Haemophilus
Klebsiella
Aerobacter
Escherichia
Proteus
Corynebacterium
Streptococcus
Pneumococcus

Bacitracin

Staphylococcus
Corynebacterium
Streptococcus
Pneumococcus

Polymyxin B

Pseudomonas
Haemophilus
Klebsiella
Aerobacter
Escherichia

In vitro overlapping antibacterial action of Neosporin® Ointment (polymyxin B-bacitracin-neomycin).

Wellcome

Burroughs Wellcome Co
Research Triangle Park
North Carolina 27709

Neosporin® Ointment

(Polymyxin B-Bacitracin-Neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Rocky Mountain spotted fever

M. S. Dickerson, MD

In 1906 Dr H. T. Ricketts successfully induced Rocky Mountain spotted fever in an experimental animal, the guinea pig. He then showed that ticks allowed to feed on the sick animal could transmit the disease to a well animal.[1] This original work was accomplished at the Rocky Mountain Laboratory, Bitterroot Valley, Mont. The causative agent carries Ricketts' name.

At the turn of the century, Rocky Mountain spotted fever was devastating to miners, ranchers, farmers, and those engaged in outdoor occupations in certain valleys of Montana and adjacent states. By 1930 states along the eastern seaboard reported an increase in morbidity. For the ten-year period of 1950-1959, in excess of 300 cases were reported annually; 822 cases were reported in 1975. More than 90% occurred in North Carolina, Kentucky, Alabama, Georgia, Oklahoma, Tennessee, Virginia, and Ohio. Only 2% of the national reporting came from the Rocky Mountain states.[2]

There are a number of interesting epidermiological characteristics of Rocky Mountain spotted fever as found in Texas.

Even though it had been a notifiable disease in Texas since 1920, the first case reported was from Sherman, Grayson County, in 1941. For the next 25 years sporadic cases were reported from many counties of the eastern half of the state. The distribution was widespread, as indicated in Fig 1. Only Harris, Navarro, Galveston, Brazoria, Dallas, Cherokee, Harrison, and Henderson Counties reported two to six cases while others reported only a single case each. There is some indication in the 1940-1964 case distribution that there may be three foci developing. A prominent characteristic of the disease is its focal nature. Three groups of counties could suggest future foci: Grayson, Collin, Dallas, and Tarrant; Henderson, Anderson, Cherokee and Navarro; and Harris, Galveston, Brazoria and Matagorda. The "islands of disease," or small circumscribed areas accounting for a high proportion of cases each year, are well exemplified in other states, such as Clermont County, Ohio, Suffolk County on Long Island, Cape Cod and Martha's Vineyard in Massachusetts. "Islands of infected ticks" maintain their infection potentiality year after year.[3]

From 1970 through 1975 the national incidence rate has more than doubled while the rate in Texas has quadrupled, reflecting a disproportionate increase in cases in Texas (Fig 2). Such an increase in cases is an indicator for the need of aggressive preventive measures.

Fig 3 shows the number of cases reported plotted against the year of reporting, giving a graphic representation of the gravity of Rocky Mountain spotted fever.

Distribution

The distribution of cases in the period 1940-1964 was scattered with some suggestion of focalizing. When we study the distribution map for 1964-1975, we immediately note the development of two distinct foci, or "islands of tick infestation" (Fig 4).

The seasonal occurrence of Rocky Mountain spotted fever has a direct relationship to the feeding habits of the tick. A ten-year study of Texas cases is reflected in Fig 5. The months of highest incidence correspond to the season of greatest tick activity.

Four component elements are necessary in the transmission of Rocky Mountain spotted fever: (1) the infective agent (the rickettsia), (2) the small animal reservoir (rodent types), (3) the appropriate tick

1. Rocky Mountain spotted fever morbidity reportings of cases acquired in Texas, 1940-1964.

vector, and (4) the hosts (large animals and humans).

The Entomology Division of the Bureau of Laboratories has identified on innumerable occasions two specific tick vectors for Rocky Mountain spotted fever, namely, *Dermacentor variabilis* (dog tick) and *Amblyomma americanum* (Lone Star tick). A third species, *Rhipicephalus sanguineus* (brown dog tick), has recently been reported by the Virology Division as producing a serological reaction in inoculated guinea pigs.[4] In general, *variabilis* is found in the counties of north and northeast Texas. *A americanum* and *R sanguineus* are found in the southeast counties and along the coast.

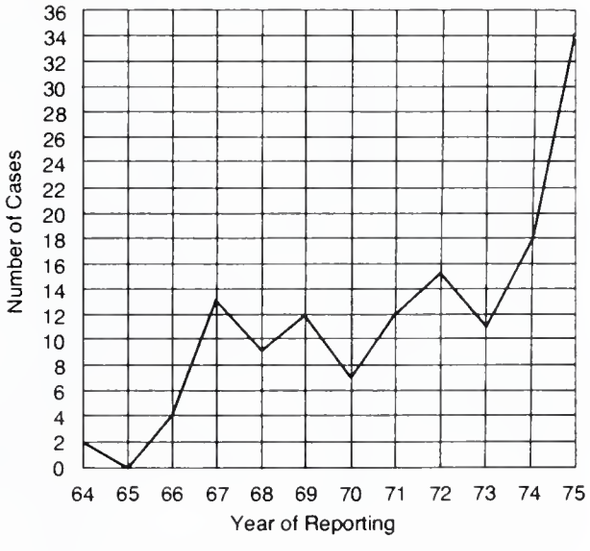
Ecological characteristics favor this distribution. Temperature, humidity and intermediate hosts are favorable. The life cycle of the tick is usually completed in two years. By March of the second year it becomes very aggressive. On warm days the adult tick climbs to the height of tall grass, weeds, and bushes, and awaits the passing of large mammal hosts including wild animals, domestic animals, dogs, and man. The latter two are probably accidental hosts.

The dog picks up the ticks when he enters the so-called "island of ticks," and carries them home to his human associates.

Age Distribution

All ages are susceptible to Rocky Mountain spotted fever. However, the experience of other investigators[5] is confirmed by the analysis of 137 Texas cases (1964-1975) that this is a disease found primarily in

3. Rocky Mountain spotted fever, total morbidity in Texas, 1964-1975.

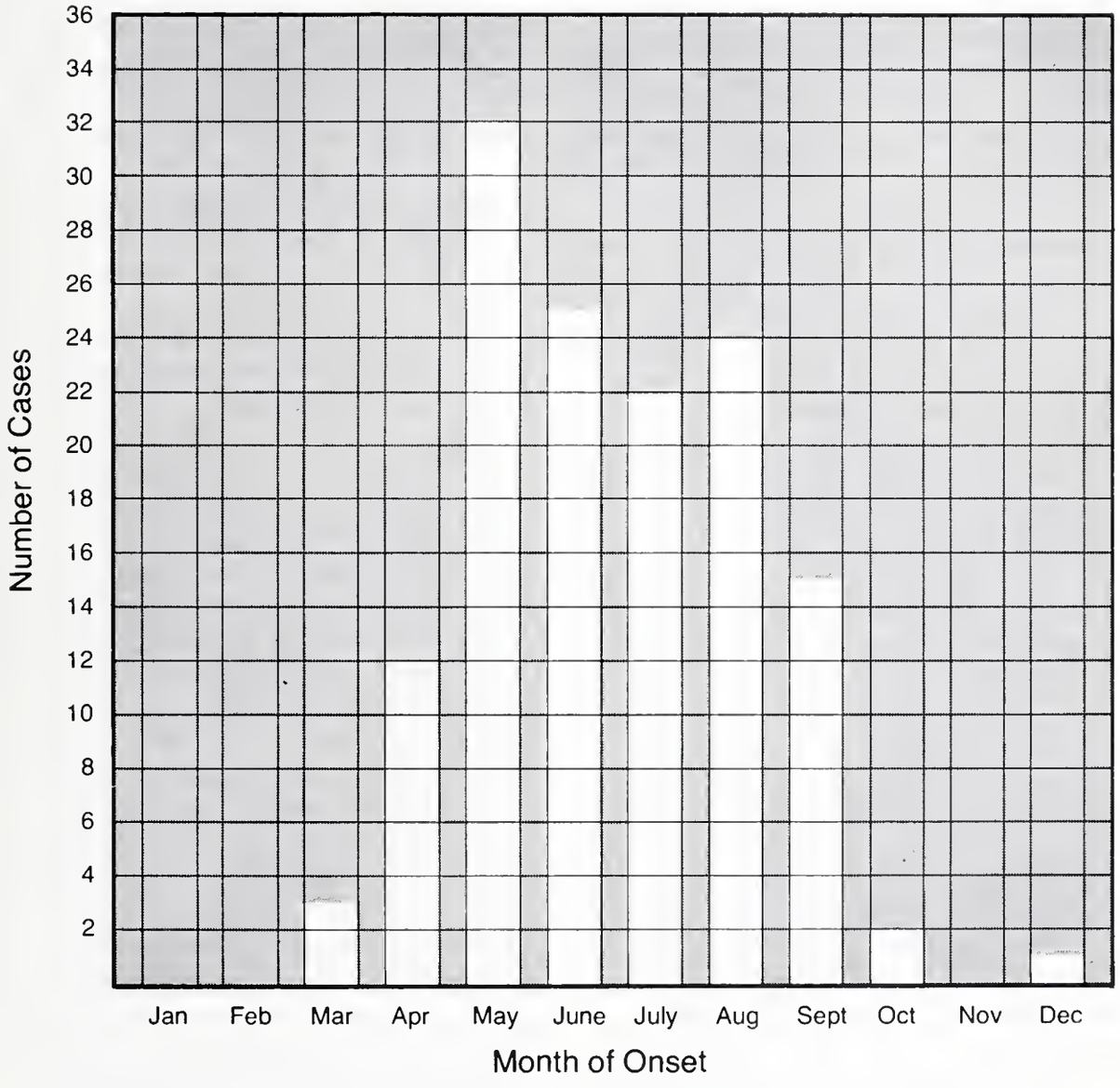


2. Morbidity in the United States and Texas, 1970-1975.

Year	United States		Texas	
	Number of Cases	Rate per 100,000 pop.	Number of Cases	Rate per 100,000 pop.
1970	380	.185	7	.063
1971	432	.209	13	.114
1972	523	.250	15	.129
1973	668	.317	11	.093
1974	774	.365	18	.149
1975	822	.383	34	.284

4. Location of Rocky Mountain spotted fever cases in Texas, 1964-1975. The number of cases occurring in each county is shown. There were two foci: a. Northeast Texas, where the vector was Dermacentor variabilis *(dog tick), and b. Southeast Texas, where the vectors were* Amblyomma americanum *(Lone Star tick) and* Rhipicephalus sanguineus.

5. Seasonal incidence of Rocky Mountain spotted fever in Texas.



6. Rocky Mountain spotted fever cases in Texas, 1964-1974, classified by age and sex of patients.

Age Group	No. Cases	Male	Female
1-12	76	43	33
13-25	21	15	6
26-40	16	9	7
41-50	11	8	3
51+	13	8	5
Total	137	83	54

7. Deaths from Rocky Mountain spotted fever in Texas, 1964-1975.

Age Group	No. Deaths	Male	Female
1-12	2	1	1
13-25	4	3	1
26-40	1	1	0
41-50	1	1	0
51+	1	1	0
Total	9	7	2

Mortality % = 6.57

Tetracycline and chloramphenicol are the antibiotics of choice.

children and young adults (Fig 6). Seventy-six patients were below 12 years of age, and 70.8% of all patients were under the age of 25. There were 43 males and 33 females. The preponderance of young males could reflect their greater participation in outdoor activities and their closer association with dogs as pets.

The ticks usually get on the legs or arms of the human host, initially crawling upwards and looking for a place to attach. They may take as long as four to six hours to attach. It is estimated that 1 tick in 20 is infective in a highly infested area.[6] An attached tick should be removed by tweezers or forceps; if the fingers must be used, they should be covered with a piece of paper.

The tick attachment must take place before infection is transmitted. Only after two hours of attachment can transmission take place. The blood of the host activates the rickettsia and virulence increases thereafter.[7]

The incubation period is variable but usually is from 3 to 12 days. The onset of illness is usually characterized by severe headache, listlessness, myalgia, chills, and high fever. About three days after onset a distinctive rash appears on the wrists, ankles, feet, and hands. At first the rash takes the form of erythematous macules, then progresses to purpuric maculopapular splotches; the rash spreads centrally.

The case fatality ratio without treatment is approximately 20%.[8] Treatment begun within the first six days of onset usually results in immediate reversal of symptoms and prompt recovery. When treatment is started after four to six days' onset, the mortality is approximately 6%.

In the Texas series of 137 cases, there were nine deaths, or 6.57% mortality (Fig 7). Two-thirds of the patients who died were 25 years old or younger.

Laboratory Aids

The physician can get little help from the laboratory in arriving at an early diagnosis. The Weil-Felix agglutinin reaction usually does not show a rise in titer until about 12 days after onset. A second serum sample is obtained about 10 days or two weeks after the acute phase of illness. A titer rise to 1:160 or 1:320 or higher can be expected.

The specific diagnostic test is the complement fixation reaction. Antibodies may not be demonstrated before the 14th to 21st day, and sometimes as long as 30 days after onset. If treatment is started very early in the course of the disease, antibodies may not be detected at all.

The *hemolymph test* has been developed by the Rocky Mountain Laboratories and is now used by the Entomology Division of the Bureau of Laboratories. A live tick, removed from its human attachment and placed in a small vial with a piece of paper wetted with a single drop of water, should be dispatched to the State Department of Health Resources Laboratories promptly.* The entomologist removes one of the legs from the live tick and places a drop of the hemolymph from the severed leg on a microscopic slide. The hemolymph is then stained and examined under a microscope for the presence of rickettsial organisms. This test can be used as a diagnostic tool to determine infection potential of ticks removed from animals or humans. The physician can be advised of the test results within a few hours.

The finding of rickettsial organisms in hemolymph of a tick removed from a human before the onset of symptoms could

*Information provided by Paul Fournier, Texas Department of Health Resources, March 23, 1976.

be an indication for prophylactic therapy. Positive findings on a tick removed from a human already experiencing symptoms could be regarded as confirmatory.

Areawide tick control is not feasible because of the large volume of pesticides that would be required to do the job. The best protection against the tick bite is frequent personal inspection. Effective repellents are good if applied within four-hour intervals.

Regular deticking of household pets, especially dogs, is an important preventive measure.

Summary

The diagnosis of Rocky Mountain spotted fever is a clinical one; the patient should be treated without waiting for a laboratory confirmation. The epidemiological characteristics of the disease do afford the physician some important clues to enable him to develop clinical impressions so that therapy can be started early:

1. Ticks found east of a line from Wichita Falls to Corpus Christi are potentially infected and act as the principal vector.
2. A history of a tick bite, or exposure to tick-infested woods or to tick-infested dogs, indicates the possibility of infection.
3. A tick found on a human should be dispatched to the Bureau of Laboratories, Texas Department of Health Resources, for hemolymph testing.
4. Rocky Mountain spotted fever is a seasonal disease occurring in Texas from March through September, but can occur at any time.
5. The disease is more prevalent in children, predominantly males.
6. The incubation period is 3 to 12 days. The onset is acute with fever, headaches, and myalgia; two to four days after onset, a maculopapular rash develops on the wrists, ankles, feet, and hands, spreading centrally.

Early clinical diagnosis and prompt antibiotic treatment is imperative. Treatment started within the first six days of onset usually results in complete recovery; treatment started after the sixth day of onset results in approximately 6% mortality. There is a 20% mortality with no treatment.

References

1. Early History of Rocky Mountain spotted fever. Government Printing Office, 1969.
2. Center for Disease Control, Morbidity Statistics, 1975.
3. Massachusetts Department of Public Health, Vol 292, No 21, On the Alert for Rocky Mountain Spotted Fever, May 21, 1975.
4. Fournier PV: Rocky Mountain spotted fever in Texas, Texas Health Bulletin, April 1975, vol 28, no 4.
5. Torres J, Humphreys E, Bisno AL: Rocky Mountain spotted fever in the Mid-South. Arch Intern Med 132:340-347, 1973.
6. South Carolina Department of Health Advisory, Journal of SC Medical Association, Vol 71, May 1975.
7. McReynolds EW, Roy S 3d: An epidemic of tick-borne typhus in children. J Dis Child 126:779-782, 1973.
8. Maulitz RM, Imperato PJ: Rocky Mountain spotted fever in urban setting. NY State J Med 74:1403-1404, 1974.

Dr Dickerson, 1205 Applegate Dr, Austin, TX 78753. Dr Dickerson recently retired as Chief of the Bureau of Communicable Disease Services, Texas Department of Health Resources.

One method for increasing the number of primary care physicians in Texas

G. Anthony Gorry, PhD, and Joseph M. Merrill, MD

Introduction

Through its internship and residency programs, the graduate medical education system of Texas should provide the manpower to meet the medical service needs of its citizens. Not only should this system produce an appropriate number of well-qualified physicians with the proper mix of specialization, but it should also help promote the equitable distribution of these physicians. For a number of reasons the graduate education system of Texas currently is not fulfilling its mission. A major effort will be required if the deficiencies in the system are to be corrected.

The state's population is expanding rapidly (to 13.2 million by 1980),* but the number of family physicians is decreasing. If these trends continue, the citizens of the state will have increasing difficulties in finding readily available physicians who practice general medicine. In response to this problem, Texas medical schools have expanded their enrollment and the number of graduates from these schools is increasing rapidly—so rapidly that the capacity of existing programs for post-MD training in Texas has not been exceeded. Further, within the present mix of graduate education positions in the state, the number of positions for family physicians is disproportionately low when measured against the need.

This deficit is offset in part by a net influx of US and foreign physicians into the state. There is, however, an increasing tendency for state legislatures to provide incentives for physicians to practice in the states that support their medical education. Also, the number of foreign medical graduates taking permanent residence in the US is likely to decline in the coming years. Hence, certain areas of the state will continue to experience significant difficulties in attracting and retaining a suitable pool of medical manpower, unless Texas expands its capacity to train family physicians.

In this article, these interrelated problems are considered and one approach is developed to rapidly increase the capacity of the Texas graduate education system for training in primary care.

Primary Care Needs in Texas

For many years it was assumed that the ratio of the total number of physicians to the state's population adequately reflected the availability of medical care. However, it has become apparent that a more meaningful ratio is that of the number of "primary care" physicians to the population. Opinions vary as to what types of medical practice comprise primary care, as well as to what types of physicians provide it. In this article, a definition developed by the Coordinating Council on Medical Education (CCME) is used:

"A Primary Care Physician is one who establishes a relationship with an individual or family for which he provides continuous surveillance of their health care needs, comprehensive care for the acute and chronic disorders which he is qualified to care for, and access to the health care delivery system for those disorders requiring the services of the specialist. The physicians who meet this definition today are general family physicians, general internists, and general pedia-

This is a report of Baylor's Center for Primary Care Education and Service. It is based largely on studies conducted by Robert J. Graham, MD, while he was at Baylor College of Medicine. Dr Graham is currently the Deputy Director of the Bureau of Health Manpower. This work was supported (in part) by USPHS RR 05425.

*Information supplied by US Census Bureau, Houston office, April 1976. Figure of 12.1 million is drawn from Series B census projection, which assumes fertility rate of replacement level, and no major changes in intra-US migration patterns.

tricians. To some degree, other specialists, such as cardiologists, gastroenterologists, obstetricians, and general surgeons may provide primary care, especially access to the health care system. They are not, however, identified either by education or practice as fulfilling consistently all the requirements of primary care physicians."[1]

It is clear that from time to time, almost every physician in almost every specialty provides services meeting the definition of primary care. The fact that specialists are called on to render primary care may reflect the increasing scarcity of full-time primary care physicians, the production of too many specialists, or an increased demand for personal health services.

In 1973, the numbers of physicians (including those in graduate training) in general practice, internal medicine, and pediatrics in Texas were: general and family practice, 2,781; internal medicine, 1,477; and pediatrics, 733, for a total of 4,991. To get an approximation of the amount of primary care service in Texas today, it was assumed that all these 4,991 physicians currently devote all their efforts to primary care. Many of the younger physicians counted in internal medicine and pediatrics undoubtedly have since chosen subspecialty careers,† but the resulting decrease in primary care services may be offset by contributions from other subspecialists and by immigration of physicians into Texas. More research is needed on this point.

Using this estimate of 4,991 full-time equivalent primary care physicians, we computed the ratio of primary care physicians to population to be about 1:2,500 in 1976. Although an ideal ratio of primary care physicians to population is not known precisely, it has generally been assumed to be in the range of 1:1,500 to 1:2,000. In this article, this range will be considered a reasonable goal, although it may be that the higher ratio—1:1,500—will become more appropriate if the average work week of physicians decreases. By this standard, the ratio of primary care physicians to population in Texas is less than it should be. In spite of this fact, Texas' available primary care training positions are fewer than the number required to train replacements for the primary care physicians who, because of death or retirement, will be leaving their practices during the next 15 to 20 years.

Expanding the System's Capacity to Train Primary Care Physicians

As an initial attempt to alleviate these problems, Texas is greatly expanding its capacity for training physicians by increasing both the number of medical schools and the size of their classes. The number of graduate MD's (osteopathy not included) in the state is expected to rise from 717 in 1976 to about 1,100 in 1982. It is important that this rapid growth in the capacity of *undergraduate* training be complemented by an expansion of graduate training positions in the state. Individuals who complete their training in a given state are far more likely to initiate their practices in that state than in any other.[2] By providing increased graduate training opportunities, the state

†F. Howell Wright, MD, Executive Secretary, American Board of Pediatrics, in a letter of March 11, 1976, provided figures showing that 80% of individuals sitting for oral examinations in pediatrics have done so on the basis of completing general pediatric training only. George D. Webster, MD, Director of Evaluation, American Board of Internal Medicine, in a letter of March 9, 1976, provided data showing that of 3,377 physicians who achieved certification in general internal medicine in 1972, 42% had completed subspecialty training requirements for subsequent certification by 1974.

may increase the number of young MD's who will practice here.

Any expansion in the state's graduate training capacity should be in *primary care* positions. In accordance with "Elements of Primary Care Graduate Medical Training," prepared for the Bureau of Health Manpower, a primary care training program (residency) can be characterized as a program that:

1. Prepares the physician for an office-based, ambulatory-care practice and develops his competence to deal with a broad range of inpatient responsibilities.
2. Provides a structured, supervised experience of no less than two consecutive years' duration in providing continuity of care to a defined patient population.
3. Places an emphasis on prospective medicine (health maintenance, patient education).
4. Provides a solid background in the social and emotional factors of health and disease.

At the present time, only family practice training programs and federally-funded prototype primary care programs have all or most of the elements outlined above. Training programs in internal medicine and pediatrics may reorient some of their graduate training positions to meet the criteria of primary care training, and it appears that the next federal health manpower legislation will provide support for the initiation of primary care training programs in internal medicine and pediatrics as well as for the continuation of family practice programs. Therefore, our plan to expand graduate training will focus on the "primary care specialties" of *family practice, primary care internal medicine,* and *primary care pediatrics* (with the addition of a small number of first-year flexible programs). All new positions will be allocated to primary care and there will be no change in the current number of specialty positions until 1984 when the percentage of primary care spaces reaches 50%.

Using data from the staffs of the American Boards of Pediatrics and of Internal Medicine, we have estimated that the following percentages reflect the current emphasis on primary care training by these specialties: internal medicine, 30%, pediatrics, 50%, and flexible, 50%. The current number of primary care spaces is computed using these percentages:

Family practice (100% of 85 positions)	85
Internal medicine (30% of 186 positions)	56
Pediatrics (50% of 77 positions)	39
Flexible (50% of 69 positions)	35
Total (28% of total 765 positions)	215

Our proposed expansion of primary care training positions begins with this roster of available first-year training positions on July 1, 1976 (Fig 1). New positions were divided among the four primary care training fields as follows: family practice, 60%; primary care internal medicine, 20%; primary care pediatrics, 15%; and primary care flexible, 5%. This percentage allocation was held constant for all years 1977-1981.

The 765 first-year positions available in Texas in 1976 represent 107% of the 717 state medical graduates. This percentage is increased in subsequent years to between 110% to 115% of the projected graduating class size for each year. This provides ample opportunity for Texas graduates to select training in Texas, and it will not burden the state with a large number of

potentially unfilled positions. An excess of positions over graduates will encourage out-of-state graduates to enter Texas for their clinical training, and, in turn, increase their chances of practicing in the state.

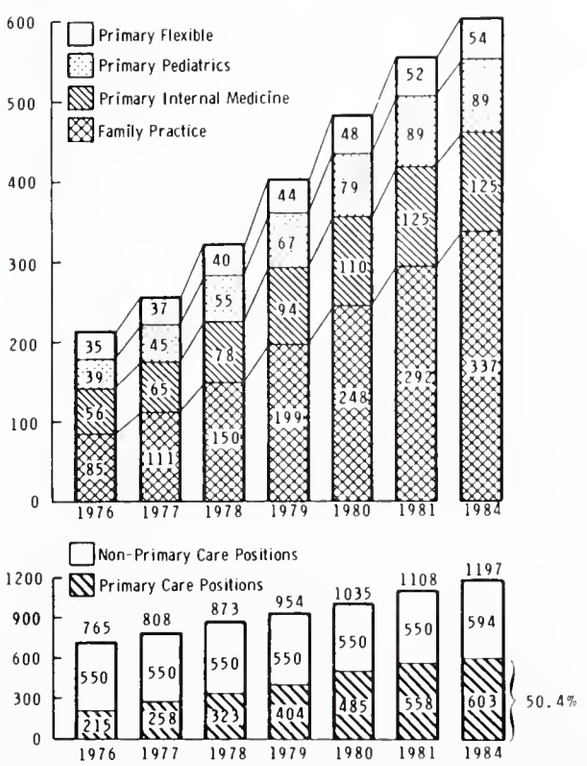
Despite the fact that this proposed expansion would more than double the number of primary care physicians produced by the system, the time required to substantially raise the family physician/population ratio is quite long. Currently it is estimated that the population of Texas will be 14.4 million in 1985 and about 15.5 million in 1990. If all primary care physicians now 60 years of age and older, and half of those between 55 and 59, retire in the next ten years, the state will lose about 1,100 full-time equivalent family physicians. This figure is derived from American Hospital Association data on age distributions for Texas physicians in general practice, pediatrics, and internal medicine. The expanded training program would provide about 3,100 new primary care physicians. Assuming all the new graduates practice in Texas, the ratio of full-time equivalent family physicians to population would be about 1:2,100. This ratio compares favorably with the current 1:2,500, but is only part way toward the desired 1:1,500. Estimates for the changes from 1976 to 1990 are: 1,700 full-time equivalent retired, 6,100 new primary care physicians added, and a ratio of about 1:1,700. These projections may be optimistic, because Texas will not retain all the graduates of its residency programs. Of course an influx of primary care physicians from other states might well offset any losses.‡

‡Physician/population ratio should be used as a gross measure only. The distribution of physicians is an important consideration which is not reflected in such a ratio.

Potential Sites for Primary Care Training Programs

New resources will have to be developed to provide for this increase in the number of graduate training positions in Texas. A number of institutions which have been traditionally considered to be too small to support graduate education may now become sites for primary care training programs. Several years of experience with family practice residencies have shown that strong, three-year self-contained programs can be conducted in hospitals with as few as 250 to 300 beds. Close links to an academic health science center can provide invaluable support. An example of a suc-

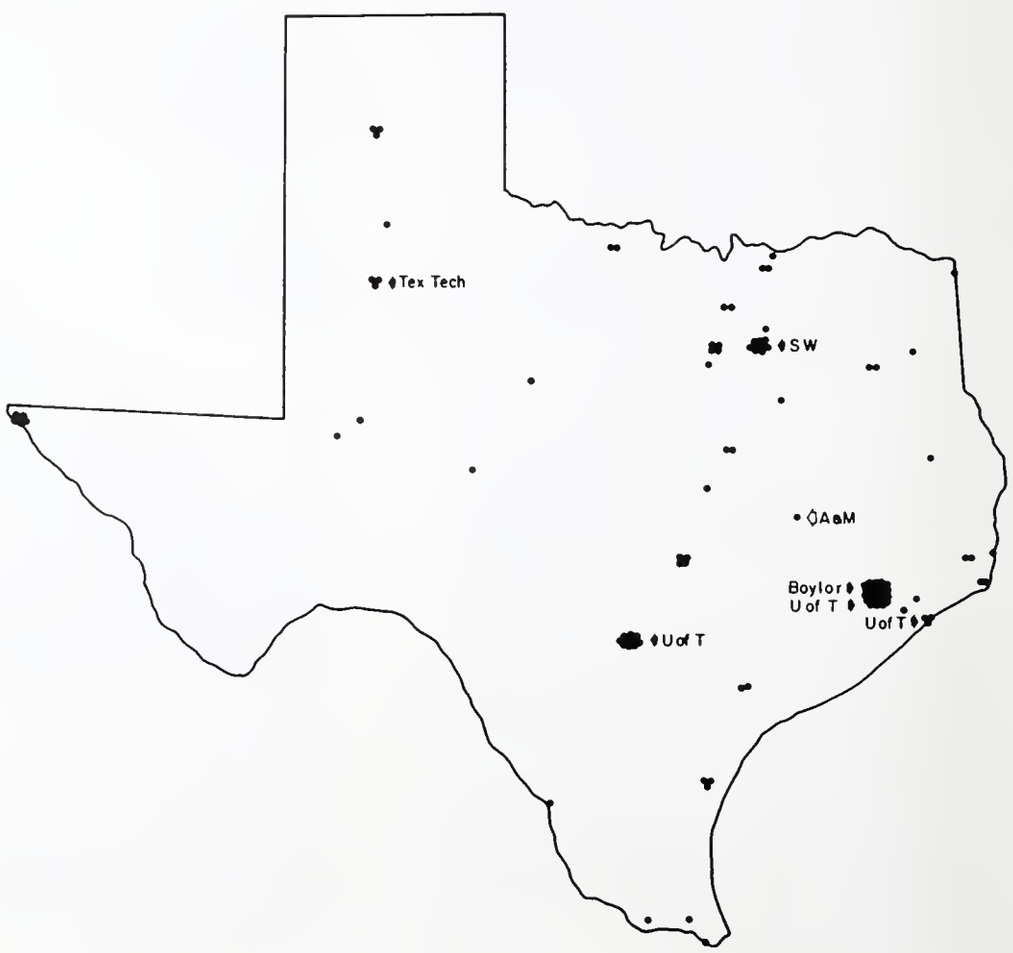
1. Proposed expansion of primary care residencies. This expansion of primary care specialties is one way for the graduate medical education system of Texas to meet the demand for more primary care in the state.



cessful program of this kind is the family practice residency program conducted in Waco under the auspices of the McLennan County Medical Society. Recently, several innovative family practice residency programs also have been inititated which utilize a larger medical center (frequently a medical school teaching hospital) for the first year of training, and a smaller, affiliated institution (bed size 150 to 300 beds) for the last two years of training.

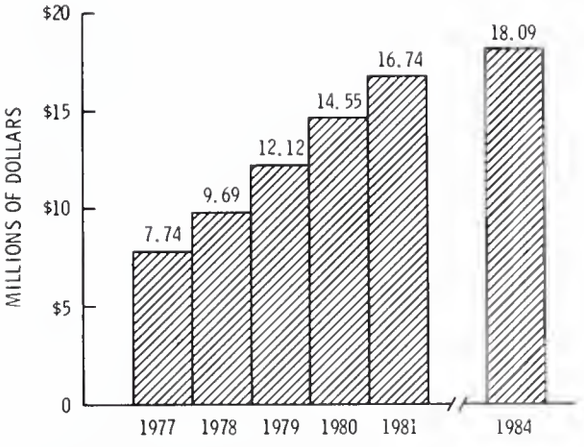
There are a large number of major hospitals in Texas which might conceivably become involved in an expanded program of primary care graduate training. Potential training sites include El Paso, Midland, Odessa, Amarillo, Abilene, the Golden Triangle, the Rio Grande Valley, Texarkana, Tyler, and Victoria. Fig 2 shows the distribution of hospitals and medical schools in the state. It is apparent that many possible training associations exist. With appropriate support, Texas medical schools can develop affiliated graduate training programs such as proposed here. Intensive efforts will be needed, of course, to achieve the total of 558 first-year positions in 1981, an increase of 343 from the present level.

2. Potential training sites for primary care residencies. The map shows the distribution of Texas' hospitals in relation to its medical schools, and underscores the numerous potential training sites for an expanded primary care residency program.



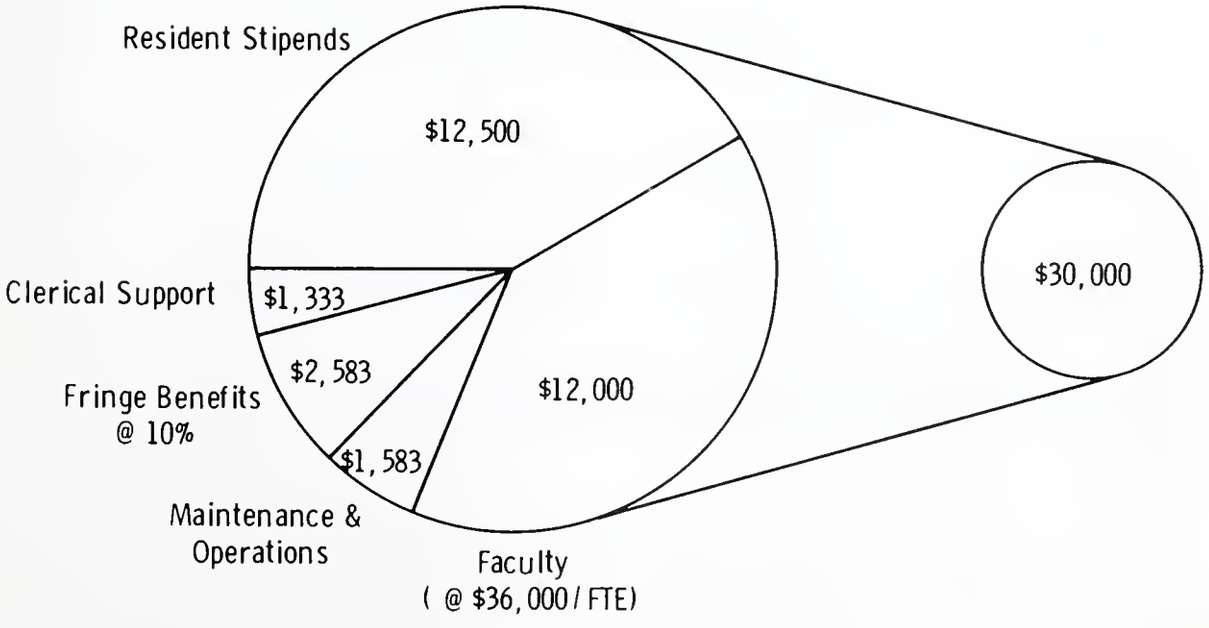
Financial Aspects of Expanding Primary Care Training Positions

Texas can significantly expand its capacity for training primary care physicians during 1976 through 1984, but the creation of the new primary care training positions will require substantial start-up and operating funds. The costs can be estimated from presently operating family practice residencies. Data from the American Academy of Family Physicians indicate that the average operating cost per year per resident in those programs is roughly $30,000. A similar figure was developed by Edward Brandt, MD, Dean of Medicine, The University of Texas Medical Branch, in his testimony of May 7, 1976, before the Education Subcommittee of the Joint Advisory Committee on Government Operations. Dr Brandt's detailed estimates are shown in Fig 3. He noted, however, that indirect costs of approximately $10,000 per resi-



4. Overall cost of expanded primary care residency program. The total cost of the expanded primary care residency program is shown on a year by year basis, assuming a cost per position of $30,000 yearly.

3. The component costs of a primary care residency position as estimated by Edward Brandt, MD, are shown. Excluded is his estimate of $10,000 for indirect costs of physical plant, utilities, increased costs of radiology, pathology, etc.



dent can be expected, and so the total cost is about $40,000. It should be emphasized that this cost may be higher in an institution which has no previous experience in training.

Fig 4 shows the total projected costs of primary care training in Texas for the years 1976 through 1984 on the assumption of a cost of $30,000 per year per resident. Costs projected here reflect an assumption of 1975 base dollars (ie, no inflation is accounted for after that date) and the indicated years are academic years. The cost of new positions has been added in the year in which the positions are created.

Primary care training programs revenue will generate from the operation of the ambulatory care training site that may in part offset these costs. Present experience in family practice indicates that "mature" programs (ie, those in operation three or more years and with a full complement of residents at each level) recover revenue to offset roughly half of the cost of operating the model unit. It also appears that for the next three to four years, federal legislation will continue to emphasize the funding of primary care residencies, not only in family practice, but in internal medicine and pediatrics as well, and this will alleviate some of the financial burden.

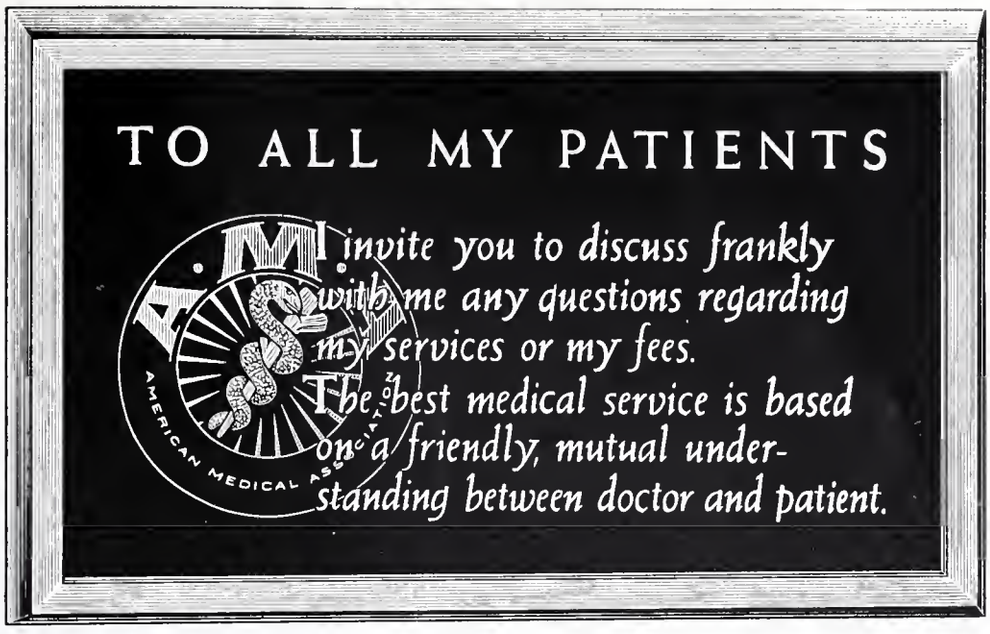
Despite these revenue sources, a major commitment of the state funds will be required to establish and maintain the primary care training program which is proposed here. With primary care practitioners in great demand today, Texas has the opportunity to assume a leadership role in initiating legislation which will provide the necessary training programs for its future physicians.

References

1. Coordinating Council on Medical Education: Physician manpower and distribution: the primary care physician. Chicago, Jan 1975, p 3.

2. Mason HR: Medical school, residency, and eventual practice location. Toward a rationale for state support of medical education. JAMA 233(1):49-52, 1975.

The author, Program for Health Management, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030.


TO ALL MY PATIENTS
I invite you to discuss frankly with me any questions regarding my services or my fees.
The best medical service is based on a friendly, mutual understanding between doctor and patient.
AMERICAN MEDICAL ASSOCIATION

Do Your Patients Understand Your Fees?

Patients hesitate to ask about fees. But they **want** to know. They naturally worry about what their medical costs will be. And if they don't feel free to talk about it, serious problems—misunderstanding, resentment and even deep hostility—can arise, threatening the all-important rapport between you and your patients.

Open discussion **before** treatment prevents such embarrassing problems. It paves the way for mutual understanding and good will.

An AMA Fee Plaque, prominently displayed in your waiting room, serves as an open invitation for your patients to discuss medical costs and financial problems with you. It shows that you care. Just seeing the message can give many financially worried patients peace of mind.

The AMA Fee Plaque works hard to prevent doctor-patient misunderstandings. And it works well.

Suitable for wall or desk display, the plaque measures 6″ x 10½″. The lettering is white on a dark brown background and the frame is durable beige plastic.

How do you obtain one?

Just mail the coupon below and your check, or money order, for $2.40 (postage paid). Your Fee Plaque will be sent to you by return mail.

Order Department
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610

Please send me_____A.M.A. fee plaques, offered at only $2.40 each. Enclosed is my check or money order for $_____.

Name_____

Address_____

City_____ State_____ Zip Code_____

Houston sets the pace for TMA's 110th Annual Session

An outstanding scientific program and an exciting city are among the catalysts that will make Texas Medical Association's 110th Annual Session the best yet.

While visiting Houston May 11-15, physicians will be able to earn up to 32 hours of Category 1 credit toward the American Medical Association's Physician's Recognition Award by participating in the continuing medical education activities being offered in conjunction with the Session. The House of Delegates and board, council and committee meetings also are on the Annual Session agenda.

Houston offers sights, culture, and history of the fastest growing major city in the United States. Host hotels (the Shamrock Hilton, Houston Marriott, Warwick, Holiday Inn Medical Center, Tidelands and Tides II) are conveniently located, and Houston's futuristic freeway system makes any part of the metropolis nearby.

Annual Session Highlights

Rep Paul G. Rogers (D-Fla) will headline the Saturday general meeting luncheon at the Shamrock Hilton Hotel. Rogers is serving his eleventh term in Congress and his sixth year as chairman of the House Public Health and Environment Subcommittee. This subcommittee has jurisdiction over all health matters except Medicare.

Some of the more prominent pieces of legislation which bear the Rogers name are the National Cancer Act, the National Heart and Lung Act, the Emergency Medical Services Act, and the Health Maintenance Organization Act. He also was the House author of the Clean Air Act of 1970 and has

produced laws designed to control noise and find solutions to the ever-growing problem of solid waste.

Richard E. Palmer, MD, president of the American Medical Association, will address the House of Delegates Luncheon at 1 pm Thursday, May 12, at the Houston Marriott Hotel.

Texas Gov Dolph Briscoe will address the General Meeting Luncheon at 12:15 pm, Friday, May 13, at the Shamrock Hilton Hotel.

The scientific program includes two new features: a rape seminar and a series of dialogue programs.

The "Medical Seminar Re Rape" is presented by the Texas Rape Prevention and Control Project, a statewide crime prevention program funded by the Criminal Justice Division of the Governor's Office. It is scheduled for Friday, May 13, 2-5 pm, and will instruct the physician on uniform procedures in the examination and treatment of rape and other sexually assaulted victims. The program also will explore the medical profession's responsibility in the courtroom.

Another addition to the schedule is a "Dialogue Program" comprising six one-hour sessions Friday, May 13, and Saturday, May 14. Each session allows for a ten-minute presentation, with the remainder of the hour devoted to a question-answer session. During these sessions, speakers active in clinical and academic medicine will discuss workup of hypertensive patients, new developments in asthma therapy, using major tranquilizers in office practice, treatment of surgical infections, recognition and treatment of depression, and alcoholism—addiction versus disease.

AMA-TMA postgraduate courses were well received last year, and six have been scheduled for this year. The courses will be presented Sunday, May 15, 8 am-1 pm. Each course is acceptable for five hours Category 1 credit. The registration fee for each is $55. The subjects of the courses are acid-base, fluid and electrolyte balance; cardiovascular disease—diagnosis, management of acute patient; office dermatology; office gynecology; office orthopedics and pediatric emergencies.

Continental breakfast presentations, another returning feature, offer 13 topics of interest to physicians. The popular lecture-discussion sessions take place Friday and Saturday mornings, May 13 and 14, 8:15-9:30 am. Coffee and rolls will be served.

Scientific activities will be supplemented by the deliberations of the House of Delegates, TMA's 272-member policy making body. The House will convene at 8 am Thursday, May 12, in the Chaparral Room of the Houston Marriott Hotel. The House also will meet Friday, May 13, and Saturday, May 14. TMA members wishing to express their views on issues facing the House may speak to reference committees meeting at 10 am Thursday at the Marriott.

Sports, Entertainment

Tennis and golf tournaments will begin Wednesday, May 11. The Westwood Country Club will be the site of a golf tournament, and tennis enthusiasts will have their tourney at the newly constructed Shamrock Hilton Tennis Courts.

The musical "Sweet Charity" will highlight Friday evening at the Shamrock Hilton. This special evening for TMA members, spouses and guests will begin with dinner at 8 pm in the Shamrock's Emerald Room. The show begins at 9:30 pm in the hotel's new Cabaret Theatre. Tickets are $20 per person, with proceeds benefitting the Student Loan Fund of the Woman's Auxiliary.

The Woman's Auxiliary to TMA will be holding its 59th Annual Convention in conjunction with Annual Session. The Warwick Hotel is headquarters for the meeting. The auxiliary's activities will follow the theme "World Premiere," an exhilarating extravaganza. Exhibits, and installation luncheon, tours, and a session with David Schmidt, management consultant and expert in time management and leadership development, highlight the schedule of events.

Things to do and see in Houston

There is a paradox in dubbing Houston the city of the future because it has an illustrious past. Founded in 1836 by two enterprising New York brothers, the city soon became the capital of the Republic of Texas. Later, Texas' first railroad operated out of Houston. In 1901, the discovery of oil at Spindletop, 90 miles from Houston, started the Texas oil boom.

Monuments to the past and to the future are found throughout the city. The San Jacinto Battleground State Park marks the site of the Battle of San Jacinto, where Texas won independence from Mexico in 1836. The San Jacinto Museum of History is in the base of the 570-foot San Jacinto Monument, the world's tallest monument. The *Battleship Texas* is anchored at this site.

The Harris County Heritage and Conservation Society has restored and furnished five early Houston homes and an early Houston church. The Society also reconstructed the historic Long Row Building with its general store, barbershop, and Houston's first lending-library, in Sam Houston Park.

Near Buffalo Bayou at the foot of Main Street, visitors can view a memorial to the city's founders, Augustus C. and John K. Allen. Allen's Landing Park is near the location of the brothers' original trading post.

Stepping out of the past, bypassing the present, and proceeding to the future, Houston offers the Lyndon B. Johnson Space Center. This $202 million complex, constructed in 1962, occupies a 1,640-acre site in southeastern Harris County, 22 miles from the heart of Houston. The Space Center conceives, designs, develops and operates manned spacecraft and trains astronauts. The Space Center houses the NASA Museum, which has on display actual equipment, films, spacecraft and exhibits of special materials from Projects Mercury, Gemini, Apollo, Apollo-Soyuz Test Project and the Space Shuttle. Guided tours are available Monday through Friday.

The Houston area is internationally recognized for its forward-moving health care system. The Texas Medical Center, bounded by Fannin, Outer Belt, MacGregor and Holcombe streets, is a monument to these medical advances. The Center combines the best of health education, health research and patient care. The combined value of Texas Medical Center buildings completed or under construction exceeds $404 million. More than 6,000 professionals and formally enrolled students study in the Center. In 1975, hospital admission volume was more than 125,000 and outpatient volume more than 1,000,000.

Houstonians work hard in their beautiful and progressive city, and they relax in atmospheres ranging from "lay-back" to lavish. Night life is found in all parts of the city, but the International Strip (the area of Westheimer Road from the 100 to the 1800 block) features a concentration of restaurants, clubs and shops. Numerous antique shops, foreign bazaars, art galleries, boutiques, health food stores, a flea market and book shops line the street. Sidewalk cafes and indoor restaurants offer international cuisines.

This is just a glimpse of Houston. Come explore the rest!

Things to do and see in Houston

Alley Theatre, 615 Texas. Multi-million dollar facility called "One of the most attractive and striking theatres in the world" by New York Times. Tours at 12:45 pm Monday-Fri. April 21-May 29: "How the Other Half Loves," a contemporary bedroom farce by English playwright Alan Ayckbourn. 713-228-9341.

Astrodome, Kirby Drive at Loop 610. Seats 66,000 and is home of Houston Astros baseball and Houston Oilers football teams. The $36 million structure, labeled the Eighth Wonder of the World, is open for tour daily. May 11, Astros vs. Chicago Cubs, 7:35 pm; May 13-15, Astros vs. Pittsburgh Pirates, 7:35 pm except Sunday, 2:05 pm. 713-748-4500.

Burke Baker Planetarium, end of Caroline Street in Hermann Park. Spectacular celestial shows re-

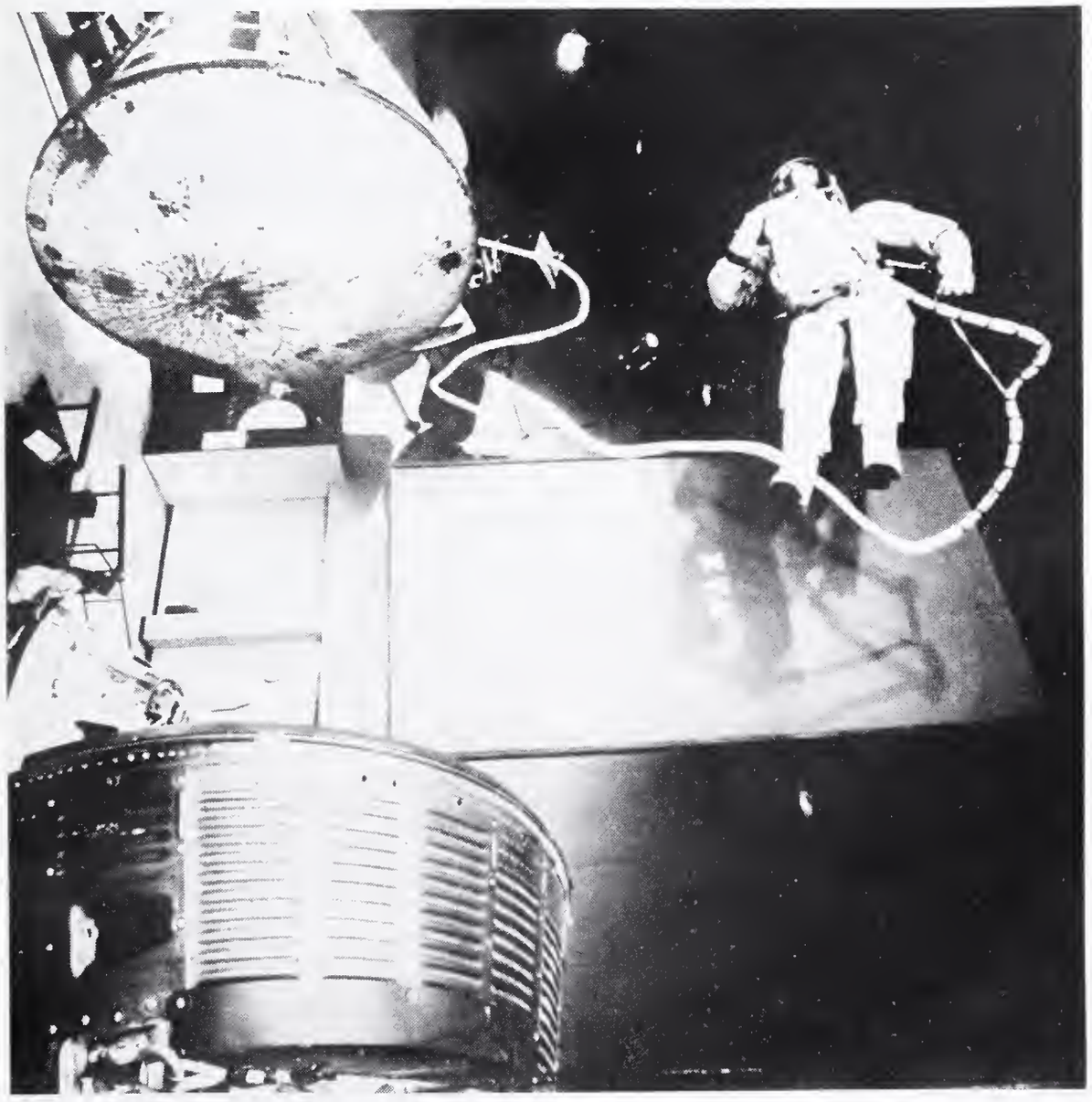
vealing the heavens as seen from outer space. 713-526-4273.

Port of Houston, third largest US port in total tonnage moved. Visitors can view turning basin area from observation platform atop Wharf 9. For close-up inspection of greatest industrial complexes in the world, visitors may take a cruise along Ship Channel aboard the *Sam Houston* inspection boat. 713-225-0671, extension 75.
Sea Arama Marineworld, Galveston Island, 52 miles south of Houston. Trained porpoise show, sea lions, penguins, snake handling, alligator wrestling, ski shows, mermaids, divers, beautiful gardens. 713-488-4441.

Museum of Fine Arts, 1001 Bissonnet. Opened in 1900, has grown into repository for finest examples of world art. Large permanent collection includes works of Frederic Remington and impressionist painters. Special exhibits during May include "The Photographic Process," demonstrating the history of photographic techniques; "The Flight Portfolio," published by International Rescue Committee, which aided artists fleeing Europe during World War II; Alice Stallknecht collection. Guided tours available by calling in advance. 713-526-1361.

Miller Outdoor Theatre, Hermann Park. Spring opera festival, evenings. Presented in conjunction with Houston Grand Opera. 713-227-5277.

Houston Symphony Orchestra, Jones Hall for the Performing Arts, 615 Louisiana. Metropolitan Opera stars to appear in Verdi's "Requiem," 8



The Apollo Hall of Exhibits, featuring this exhibit on Gemini Extravehicular Activity, is one of the stops on daily tours of the Lyndon B. Johnson Space Center.

Photo by Ezra Stroller

The Alley Theatre, the only resident professional theatre in the Southwest, has been called "One of the most attractive and striking new theatres in the world." "How the Other Half Loves," by English playwright Alan Ayckbourn will be performed April 21 through May 29.

pm, May 10. Guest pianist Horacio Gutierrez to perform Ives' "Fourth of July," Beethoven's "Concerto No. 4 for Piano," others, at 2:30 pm, May 15. 713-224-4240.

Night Spots

Hyatt Regency Hotel, 1200 Louisiana. Varied night on the town under one roof. Back Room has piano music; Spindle Top has spectacular view of the city; Hugo's Window Box offers elegant dining; Crystal Forest features showy bands and entertainment Mon-Thurs 9:15 and 11:15; Fri-Sat 9:45 and 11:45. Cover. 713-654-1234.

La Carafe, 813 Congress. City's oldest building on its original site. Formerly Kennedy's Trading Post, now a bar full of antiques and paraphernalia. Mon-Fri noon-2 am, Sat 2-2, Sun 3-2. No cover. 713-226-9830.

Liberty Hall, 1610 Chenevert. Best in national blues, rock, country and local talent. Informal atmosphere. Fri-Sat shows at 8 and 11. Cover varies. 713-659-1082.

Million Dollar Dump, 300 Westheimer. Las Vegas-style revues plus dinner in a formal setting. 713-527-9033.

Sonny Look's Depot, 212 Milam. Mon-Thurs 5:30-12:30. Fri-Sat til 1:30. Shows Mon-Thurs 9 and 11; Fri-Sat 9:30 and 11:30. No cover. 713-222-6366.

The Tidelands, 6500 S. Main. Rumba, samba, and cha-cha to band's Latin music in chic 60s style. Tues-Sun 6-2. Cover. Thurs-Sat. 713-524-5291.

Todd's, 5050 Richmond. One of the most popular Southwest area restaurant/clubs. Marimekkos, wood, and plants set off light meals and disco dancing. Dress code. Open 7 days 11-2. No cover. 713-626-5990.

Texas Opry House, 1416 Richmond. Converted supermarket with "kicker" decor. National concert acts booked regularly. Tues-Sat 7:30-2, occasionally Sun and Mon. 713-524-5667.

Theodore's, 304 Avondale. Music nightly: folk, rock, jazz. Upstairs lounge, patio, outdoor courtyard, backgammon room. Mon-Thurs 4:30-2, Fri-Sat 4-2, Sun 7-2. 713-522-9797.

Restaurants

Brennan's 3300 Smith. French and Creole specialties prepared at breakfast, lunch, and dinner. Dixieland band during Saturday brunch. Bar. Open 7 days 9-2:30 and 6-11. 713-522-9711.

Foulard's, 10001 Westheimer. Awarded a star by *Texas Monthly*, designating it as "highest quality." Crepes, veal dishes. Open 7 days for lunch 11-6, dinner 6-11, supper 11-2. Reservations requested. 713-789-1661.

Maxim's, 802 Lamar. Seafood, extensive wine selection. Bar. Mon-Fri 11-11, Sat 6-midnight. Closed Sunday. 713-658-9595.

Nakkita's, 1100 Richmond. Russian menu. Bar. Lunch Mon-Fri 11:30-2. Dinner Mon-Sat 6-11. Closed Sunday. 713-526-1176.

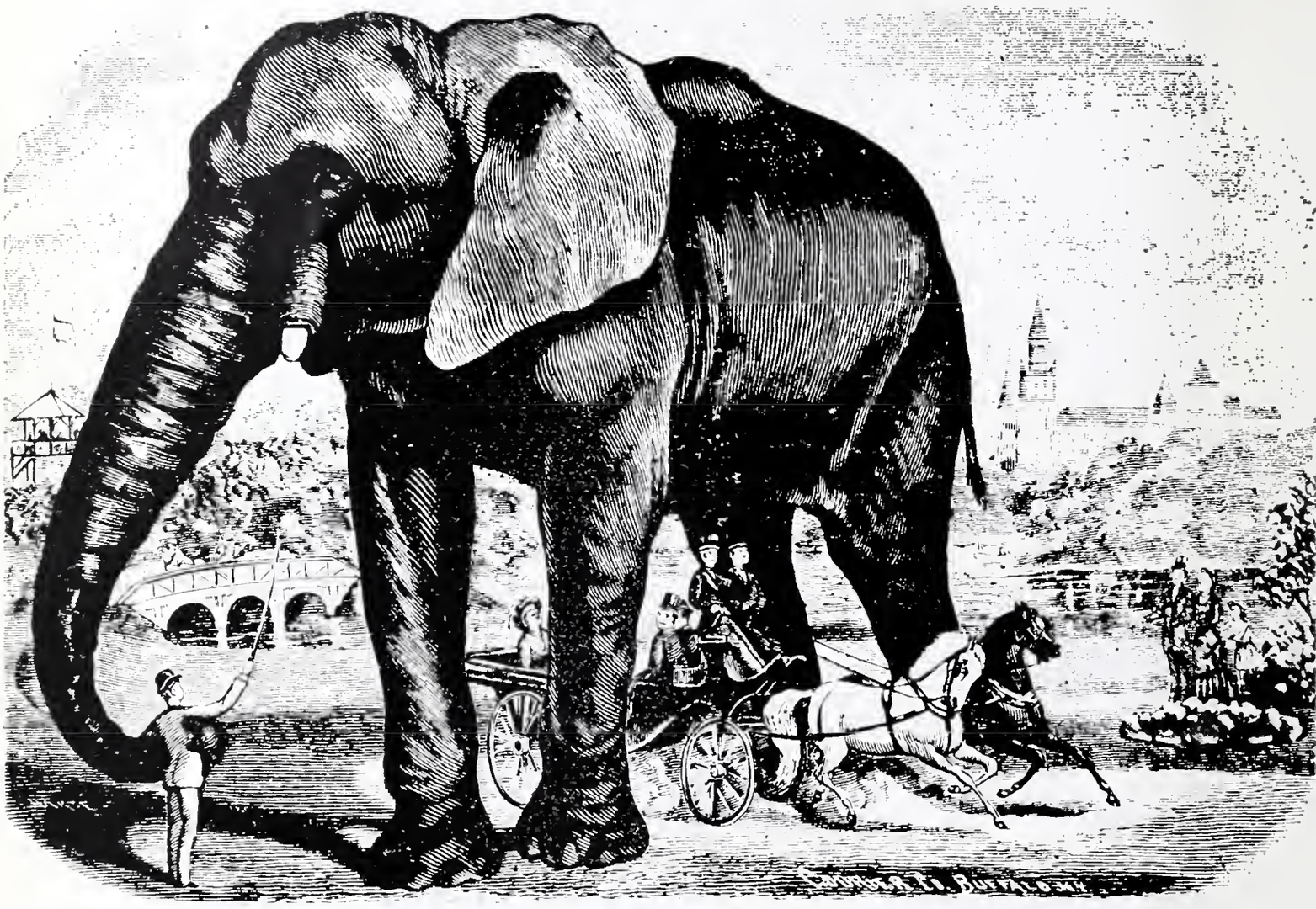
Tokyo Gardens, 4701 Westheimer. Japanese cuisine. Bar. Lunch Mon-Fri 11:30-2. Dinner Fri 6-11, Sat 5:30-midnight, Sun 5:30-10:30. 713-622-7886.

Tony's, 1801 S. Post Oak. Another *Texas Monthly* star for excellence. Fresh seafood, veal dishes, salads. Bar. Extensive wine selection. Lunch Mon-Fri 11:30-2. Dinner Mon-Thurs 6-11, Fri-Sat 6-11:30. Closed Sunday. 713-622-6778.

Railhead, 6400 Richmond. Seafood delivered to Houston by plane and ship. Alaskan king crab, Australian lobster, Bangladesh shrimp; steaks, prime rib. Bar. Dinner Mon-Thurs. 5:30-11, Fri-Sat til 11:30, Sun 5-10:30. 713-784-5400.

Victoria Station, 3015 S. Post Oak and 7807 Kirby. Prime rib, steaks, salad bar. Bar. Post Oak location open for lunch Mon-Fri 11:30-2, Sat noon-3. Dinner Mon-Thurs 5:30-11, Fri-Sat 5-midnight, Sun 5-10. Kirby location open for lunch Mon-Fri 11:30-2. Dinner same as Post Oak. Post Oak, 713-621-7781; Kirby, 713-661-8043.

Sidewalk cafes featuring international bills of fare can be found in Houston's Westheimer area.



See The Motorcycle ?

You may not find a motorcycle in this picture, but you'll find plenty of them on Texas' streets and highways.

The trouble is, not enough automobile drivers are seeing motorcycles when they should. Not until it's too late, anyway.

Maybe if motorcycles were as big as elephants, you'd be more careful when you see them. But nothing is bigger than human life. And that's what we're really asking you to look out for.

CycleSafe

The Governor's Office of Traffic Safety

The impaired physician

Estimates are that perhaps as many as one out of ten physicians is impaired in some manner which impacts his practice . . . Yet, only one-tenth of these individuals have been identified or even confronted by their colleagues regarding their problem.

The practice of medicine is prone to many occupational hazards, much more so than other professions.

Long hours of practice often leave physicians little time for recreation or time for the family, thus creating stress.

This stress in turn causes many physicians to turn to alcohol, drugs, or other outlets.

In other cases, physicians, due to age or disability, may reach a point which impairs their ability to practice with required skill in a particular specialty or in direct patient contact situations.

"These are all instances in which our professional societies should reach out and provide the necessary mechanism for providing consultation, guidance, and rehabilitation for our colleagues," says Drue O.D. Ware, MD, Fort Worth, vice chairman of the TMA Board of Councilors, the ethics and disciplinary body of TMA.

The Board of Councilors believes that sufficient evidence exists to demonstrate that physicians who suffer from alcoholism, drug addiction, mental and emotional instability, senility, and certain other types of physical or mental impairments, pose serious problems to the physician himself, his family, his patients, his hospital, and the medical society, Dr Ware said.

"We further believe that there are physicians in almost every community or hospital who have such impairments, but who have not been confronted by their colleagues," Dr Ware said.

At least 28 states have adopted legislation dealing with impaired physicians, all at least partly drawn from the AMA model act. There are at least 23 state medical societies that have implemented or are planning to implement impaired physician programs. This number includes Texas' neighboring states of New Mexico, Arkansas, and Oklahoma.

The Texas Medical Association has approved the establishment of a Committee on the Impaired Physician. The Committee is in the formative stages of development, and will meet for the first time at TMA Annual Session in May.

The new TMA committee will concentrate on identifying the disabled or impaired physician; motivating the physician toward treatment; and assisting in the rehabilitation of the physician to provide re-entry into the health-care system wherever possible.

TMA committee goals and guidelines

The Committee on the Impaired Physician will be comprised of nine physicians selected in a way to establish a broad representation of various specialties.

TMA selected this approach because it has the advantage of having a specialist to confront a potentially impaired physician in the same or similar specialty. The specialist also would work closely with any committee of the county medical society, in evaluating the effect of any emotional, physical, or chemical dependent impairment of the physican's ability to practice a particular specialty.

In addition to practicing physicians, it is likely that the committee will include physicians in institutional or teaching settings. Medical students and house staff representatives may be appointed to provide support in cases involving physicians or students in training.

As the activities of the committee become more publicized, it is likely that it will be expanded by the addition of others.

The committee will be encouraged to consult with all officers of county medical societies, specialty societies, and local-level society committees which have been established for this purpose.

Although the AMA guidelines recommend that the programs should be operated under the auspices of the state society rather than the county medical society, the Board of Councilors feels strongly that those societies with effective, on-going programs should be allowed to continue them.

The TMA committee will place primary focus on dealing with the impaired physicians from societies that do not have a local committee, or in an instance where the county society feels state intervention is needed.

The committee will work closely with allied health professionals including hospital administrators, nurses, pharmacists, in the areas of identification and documentation of disabled physicians.

In the past, public grievance committees and boards of censors of county medical societies have provided a mechanism for the public to register concerns regarding the physician-patient relations or about the ability of a physician to practice. In the future, instances where investigation of these bodies results in identification of potentially impaired physicians, the TMA committee may be consulted concerning avenues of treatment or rehabilitation which may have been overlooked or ignored.

The commmittee will continue to work closely with the Texas State Board of

Medical Examiners in identification of impaired physicians.

Several legislative measures have already been supported TMA which will increase the number of investigators used by the State Board of Medical Examiners, and also will permit the sharing of pertinent information between medical societies, hospitals, and the licensing agency.

Although the approach of TMA will primarily be voluntary and non-coercive, the sharing of information with the State Board of Medical Examiners will provide an impetus for action in cases where the physician is reluctant to seek consultation or treatment.

Challenges facing the Committee

The greatest roadblock which must be overcome is the conspiracy of silence, said Dr Ware. Too often, physicians are reluctant to admit that a colleague's behavior is not normal, or that his practice is not up to par, he said.

"Sometimes we fail to confront the problem of a colleague because he or she is a close personal friend, or because we do not want to take away the livelihood of the family.

"However, we must overcome these negative attitudes toward counseling since it is our responsibility as professionals to assure that the patient is protected," he said.

"Once identified, it is our responsibility and duty to counsel, confront, counsel and motivate a colleague to seek some form of treatment.

"The confronter must be truly compassionate and act out of concern for his colleague," he said.

Although the approach to a colleague should initially be non-coercive and non-threatening in nature, those who serve as confronters must be willing to resort to coercive tactics if our efforts to encourage treatment are unsuccessful, Dr Ware said.

It is not enough for the profession to identify centers for treatment of chemical dependency problems or emotional disorders, but often the profession must provide other avenues of financial and moral support for the family of the physician who enters the treatment program.

Financial and counseling support may be required for the family during this rehabilitation phase, Dr Ware said.

The committee will call upon the TMA Woman's Auxiliary, physicians in the community, and other resources to provide this necessary support through the treatment and re-entry process once treatment has ended, Dr Ware concluded.

Treatment of physician-patients

In August 1976, the National Association of Private Psychiatric Hospitals distributed to its members a questionnaire, developed by the Department of Mental Health of the American Medical Association, that related to the treatment of physician-patients.

Of approximately 185 questionnaires mailed, 58 were completed and returned, including 46 from hospitals that had admitted some 240 physicians to treatment during the preceding 12 months.

Most of these hospitals estimated that the number of physician admissions had remained fairly stable over a 10-year period.

Eleven recorded an increase, and five a decrease. Average length of treatment ranged from seven days (mostly outpatient) to 90 days, and was frequently 20 to 30 days.

Only three hospitals reported that the length of stay for physicians was longer than that for other patients. Twelve reported that it was shorter, and 34 believed it was almost the same.

Asked to list the three leading illnesses in their physician-patients, respondents indicated that alcoholism and drug dependence were encountered more often than any other disorders.

Depression, including manic-depression and depressive reaction, was ranked next, and neuroses, especially depressive neuroses, were third.

Fourth, with 11 hospitals listing it, was schizophrenia.

Most hospitals thought the incidence of alcoholism and depression among physician-patients was about the same as among their other patients. Of those that noted a significant difference, five hospitals believed there was less alcoholism among physicians and 13 believed there was more. Only one hospital reported less clinical depression in physicians and 18 reported more.

With respect to drug dependence, eight hospitals said there was less among their physician-patients, 17 said there was more and 20 said there was no appreciable difference.

Therapy for physicians was reported to be substantially the same as for other patients, with psychotherapy (individuals and group) and chemotherapy mentioned most often.

Hospitals also were asked to compare physician-patients with other patients in regard to re-admissions, outpatient therapy and hospital insurance coverage. Most hospitals reported no significant differences.

Of those that did, 18 said physicians had fewer re-admissions and three said they had more; seven said physicians had less outpatient therapy and four said they had more; two said physicians had less insurance coverage and 11 said they had more.

The questionnaire gave respondents an opportunity to enumerate any unique problems associated with their treatment of physican-patients.

Three-fourths of the hospitals mentioned one or more difficulties.

Heading the list was the reluctance of the physician to accept the role of patient, together with his propensity for prescribing his own treatment and length of stay.

This reluctance was seen as being responsible for another difficulty—delay in seeking treatment until the advanced stages of illness.

Other special problems included the patient's concern over confidentiality and his professional image, his fear that the treatment record might lead to loss of licensure, feelings of guilt and shame, and relatively easy access to psycho-active drugs in the hospitals.

Other special problems included not keeping appointments as an outpatient because of a busy work schedule, the staff treating the patient as a special case because he is a physician, and the staff experiencing feelings of being threatened.

What Makes A Hospital Great For Doctors?

- Doctor Management?
- A Growing Metropolitan Area?
- Close Linkage With Medical — Research Facilities?
- Constant Addition Of New Ideas, Young Ideas?
- All The Above?

We Think So!

That's why Pasadena Bayshore is the ideal place to begin your practice.

You'll help us continue to build greatness. You'll begin building your practice — your career — as you help the continued building of this 379 bed (soon to be 470 bed) hospital, situated in Pasadena, Texas — just north of the Space Craft Center — a few miles east of the Houston Medical Center.

Built by physicians, Bayshore has move-in options, services, and many special facilities designed to meet the individual physician's relocation needs. Check these advantages, then check with the Pasadena Bayshore Hospital.

- Ninety acre complex — space for growth.
- Ample office space presently available in modern, professional building.
- Importantly for young doctors — you are assured of an immediate practice. Talk with us about your income assurance during that first critical year.
- Lots available — room for your own office buildings.
- Doctor Management — doctors' needs are paramount.
- Highly-trained staff — superior general services.
- Specialized services and facilities — including nuclear medicine, obstetrics, cardiology (and psychiatry located in our separate Psychiatric Annex).
- For your convenience - answering service, full line of doctors' office supplies, and more.

For information call (713) 944-6666 EXT 221
Charles M. Cooper, Jr., Administrator

PASADENA BAYSHORE HOSPITAL

4000 Spencer Highway **Pasadena, Texas 77504**

Medical Newsmakers

ANTONIO M. GOTTO, JR., MD, has been named the Bob and Vivan Smith Professor and Chairman of Medicine at Baylor College of Medicine in Houston and Chief of the Medical Service at The Methodist Hospital. He succeeds Henry D. McIntosh, MD, who announced his resignation last October pending suitable replacement. As chairman, Dr Gotto will also serve as the Physician-in-Chief of the Medical Service in the Harris County Hospital District.

WILLIAM A. PETTINGER, MD, professor and chairman of clinical pharmacology at The University of Texas Health Science Center at Dallas, has been selected one of the ten distinguished scientists to serve as a Creasy Visiting Professor of Clinical Pharmacology. Dr Pettinger is a member of the American Heart Association's Council for High Blood Pressure Research, the Southern Society for Clinical Investigation, and the board of directors of the American Society for Clinical Pharmacology and Therapeutics. He is also a fellow of the American College of Physicians and Cardiology.

R. RUSSELL MARTIN, MD, professsor of Medicine, Microbiology and Immunology, at the Baylor College of Medicine has been awarded a grant by the Council for Tobacco Research—U.S.A. Inc. Dr Martin's project is "Induction of aryl hydrocarbon hydroxylase in lymphocytes and pulmonary macrophages."

JACK PRITCHARD, MD, professor of obstetrics and gynecology at the Southwestern Medical School of the University of Texas Health Science Center at Dallas, has been named to a three-year term on the National Institute of Child Health and Human Development Council.

JOSEPH T. AINSWORTH, MD, is a new member of the AMA Council on Legislation. The Houston physician is also Chairman of the TMA Council on Medical Legislation.

The American Lung Association has awarded five Christmas Seal fellowships totaling $50,000 to train pulmonary specialists in Texas during 1977. Doctors who have completed their internships and residencies are eligible for the two years of advanced study required to become specialists in lung disease. The fellowships were awarded to Joseph E. Burks, MD, in training at the UT Medical Branch at Galveston, Junji Higuchi, MD, in training at the UT Health Science Center at San Antonio, Michael S. Haynes, MD, who will train at the UT Health Science Center at Dallas and Steward K. Olvey, MD. In addition an American Lung Association Institutional Training Grant has been awarded to the UT Health Science Center at Houston where a fellow will be selected.

KENNETH ALTSHULER, MD, will become chairman of the Department of Psychiatry at The University of Texas Southwestern Medical School in Dallas in June. Dr Altshuler, currently professor of clinical psychiatry and director of medical education in that specialty at Columbia University's College of Physicians and Surgeons in New York City, also will become chief of psychiatric services at Parkland Memorial Hospital, Southwestern's primary teaching affiliate. Dr Altshuler's work received the Thornton Wilson Award in Genetics and Preventive Psychiatry in 1961, the Merit Award of the Association for Psychoanalytic Medicine in 1963, and a Certificate of Significant Achievement for his role in developing a program of mental health services to the deaf, awarded by the American Psychiatric Association in 1976.

WELCOME TO HOUSTON

1977 ANNUAL SESSION MAY 12-15, HOUSTON
TEXAS MEDICAL ASSOCIATION

FEATURING

52 GUEST SPEAKERS plus 350 special and TMA-member speakers

21 SECTION PROGRAMS: Allergy, Colon and Rectal Surgery, Digestive Diseases, Diseases of the Chest, Family Practice, Internal Medicine, Neurology, Neurological Surgery, Nuclear Medicine, Obstetrics and Gynecology, Ophthalmology, Otolaryngology, Pathology, Pediatrics, Physical Medicine and Rehabilitation, Plastic, Reconstructive and Maxillofacial Surgery, Psychiatry, Public Health, Radiology, Surgery, Urology.

AMA-TMA POSTGRADUATE COURSES Scheduled Sunday, May 15, 8 a.m.-1 p.m. Each course acceptable for five hours Category 1 credit, AMA Physician's Recognition Award. Fee: $55. (Registration information will be sent to membership in separate mailing.)

Acid-Base, Fluid and Electrolyte Balance • Cardiovascular Disease—Diagnosis, Management of Acute Patient • Office Dermatology • Office Gynecology • Office Orthopaedics • Pediatric Emergencies

20 CURBSTONE CONSULTATIONS Person-to-person conversational discussions of cases and problems of general medical interest.

13 CONTINENTAL BREAKFAST PRESENTATIONS Join guest speakers for coffee, rolls, and short lectures Friday and Saturday mornings. Then participate in the informal half-hour discussion period following.

30 SPECIALTY SOCIETY PROGRAMS • 8 SPECIAL COMMITTEE SYMPOSIUMS • 160 SCIENTIFIC AND TECHNICAL EXHIBITS • FORUM OF ORIGINAL RESEARCH • PHYSICIANS' AND SPOUSES' ART EXHIBITION

SPORTS/ENTERTAINMENT Golf, Tennis, Fraternity and Alumni Parties, Class Reunions.

An Evening at the Cabaret. A Dinner Theater for members and guests of TMA Friday, May 13. Dinner in the Shamrock Hilton Emerald Room at 8 p.m. A musical at 9:30 p.m. in the hotel's new Cabaret Theater.

ADVANCE REGISTRATION FORM—FILL OUT BOTH SIDES AND MAIL TODAY

Save time and effort by registering in advance. Fill out the card at the right, mail it to TMA, and your registration packet will be waiting for you. There is no registration fee for TMA members. Registration materials may be picked up at the Shamrock Hilton Hotel, the Houston Marriott Hotel, or the Holiday Inn Medical Center.

A form for ordering tickets to the General Meeting Luncheons, the Dinner Theater, and other events is located on the back of this advance registration card. Save time by ordering your tickets now.

NAME_____

ADDRESS_____

CITY OF RESIDENCE_____

SPECIALTY_____

CONVENTION ADDRESS_____

_____

COUNTY SOCIETY_____

I shall pick up my convention materials at:

☐ Shamrock Hilton Hotel

☐ Houston Marriott Hotel

☐ Holiday Inn Medical Center

Mail to: Texas Medical Association
1801 North Lamar Blvd., Austin, Texas 78701

TO SAVE TIME AND ASSURE YOUR TICKET RESERVATION, USE ADVANCE TICKET ORDER FORM ON OTHER SIDE AND

PLEASE CHECK THE APPROPRIATE SPACES BELOW

☐ MEMBER PHYSICIAN
☐ NON-MEMBER PHYSICIAN
☐ INTERN OR RESIDENT
☐ MEDICAL STUDENT
☐ MEMBER SPEAKER
☐ SCIENTIFIC EXHIBITOR
☐ PRESIDENT, COUNTY MEDICAL SOCIETY
☐ DELEGATE
☐ ALTERNATE DELEGATE
☐ COUNCILOR
☐ VICE COUNCILOR
☐ TMA COUNCIL CHAIRMAN
☐ GUEST REPRESENTING

_____

_____

_____

CONTINENTAL BREAKFAST PRESENTATIONS

Reserve your tickets with card below.

Friday, May 13, 8:15-9:30 a.m.

1. HEADACHES: THEIR DIAGNOSIS AND TREATMENT
   Abe B. Baker, M.D.
   Minneapolis, Minnesota
2. THE STATUS OF T AND A, 1977
   Charles D. Bluestone, M.D.
   Pittsburgh, Pennsylvania
3. OBESITY
   George F. Cahill, Jr., M.D.
   Boston, Massachusetts
4. MANAGEMENT OF TUMORS OF THE MAJOR SALIVARY GLANDS
   Edgar L. Frazell, M.D.
   San Antonio, Texas
5. WHAT'S NEW IN ANTIBIOTIC THERAPY?
   Robert G. Petersdorf, M.D.
   Seattle, Washington
6. TRANSCUTANEOUS STIMULATION AND OTHER METHODS OF PAIN CONTROL, INCLUDING ACUPUNCTURE
   George W. Waylonis, M.D.
   Columbus, Ohio

Saturday, May 14, 8:15-9:30 a.m.

7. DIFFERENTIAL DIAGNOSIS OF PIGEON-TOEIN IN CHILDREN
   Eugene E. Bleck, M.D.
   Palo Alto, California
8. COMMON PROBLEMS IN OBSTETRICAL ANESTHESIA
   Winnie J. Crump, M.D., Houston, Texas, Modera
   George B. Jackson, M.D., Houston, Texas
   Frank H Morriss, Jr., M.D., Houston, Texas
   Frank Moya, M.D., Miami Beach, Florida
9. SOME ASPECTS OF PULMONARY INFECTIONS
   Sydney M. Finegold, M.D., Los Angeles, Califor
   Robert G. Petersdorf, M.D., Seattle, Washingto
10. CONTROVERSIES, MANAGEMENT OF COLON A RECTAL CARCINOMA
    Donald M. Gallagher, M.D.
    San Francisco, California
11. PRINCIPLES OF RADIOIMMUNOASSAY
    Phillip L. Howard, M.D.
    Burlington, Vermont
12. BACTEREMIA IN FEBRILE CHILDREN
    Jerome O. Klein, M.D
    Boston, Massachusetts
13. MONITORING AND ADJUNCTIVE CARE OF TH CRITICALLY-INJURED OR ILL PATIENT
    G. Tom Shires, M.D.
    New York, New York

USE THESE FORMS TO REGISTER IN ADVANCE, BUY TICKETS AND MAKE HOTEL RESERVATION

HAVE YOUR TICKETS READY FOR YOU WHEN YOU GET TO HOUSTON

Avoid the lines, the last minute rush, and the possibility of missing out on the TMA functions lis ed below. Fill out the advance ticket order form, mail it to TMA with your check, and your ticke will be waiting for you.

MAIL TO: TEXAS MEDICAL ASSOCIATION
1801 NORTH LAMAR BOULEVARD, AUSTIN, TEXAS 78701

NUMBER OF TICKETS	FUNCTIONS AND PRICE (inclusive of tax and gratuity)	AMOUNT
_____	AN EVENING AT THE CABARET (DINNER THEATER)—Friday (May 13) @ $20 per person	_____
_____	GENERAL MEETING LUNCHEON—Friday (May 13) @ $8.25 per person	_____
_____	GENERAL MEETING LUNCHEON—Saturday (May 14) @ $8.25 per person	_____
_____	CONTINENTAL BREAKFAST PRESENTATIONS—Friday (May 13) @ $1.50 per person	_____
	1.___ 2.___ 3.___ 4.___ 5.___ 6.___ (see list—select one)	
_____	CONTINENTAL BREAKFAST PRESENTATIONS—Saturday (May 14) @ $1.50 per person	
	7.___ 8.___ 9.___ 10.___ 11.___ 12.___ 13.___ (see list—select one)	_____
	CHECK ENCLOSED FOR TOTAL $	_____

ADVANCE REGISTRATION FORM

GENERAL MEETING LUNCHEONS

Friday, May 13, 12:15 p.m., Sham rock Hilton Hotel. Luncheon speake will be Edward Teller, Ph.D., LL.D. physicist, Stanford, California.

Saturday, May 14, 12:15 p.m., Sham rock Hilton Hotel. Featured speake will be The Honorable Paul G Rogers, Congressman, House of Rep resentatives, Washington, D. C.

AN EVENING AT THE CABARET

Join your frinds for TMA's own spe cial Dinner Theater Friday, May 13 Have dinner in the famous Emerald Room of the Shamrock Hilton at 8 p.m. and see a lively musical in the hotel's new Cabaret Theater at 9:30 p.m.

CONTINENTAL BREAKFAST PRESENTATIONS

Friday, May 13, and Saturday, May 14, 8:15-9:30 a.m., Shamrock Hilton Hotel and the Holiday Inn Medical Center. Attendance is limited. Have coffee and rolls with a guest speak

HOUSING BUREAU USE ONLY

OFFICIAL HOUSING REQUEST

TEXAS MEDICAL ASSOCIATION
110th Annual Session • May 12-15, 1977
Houston, Texas

MAIL TO:

HOUSING BUREAU
1006 Main — Suite 1101
Houston, TX 77002

(See location of facilities on back)

PARTICIPATING HOTELS AND CODES

EL CODE	HOTEL
	.....Shamrock Hilton Hotel
ntific Sessions and Exhibits	
es	$ 29-43
les	$ 41-55
s	$ 41-55
s	$ 90 up 2-rm
	$140 up 3-rm
	.....Houston Marriott Hotel
e of Delegates, Boards, Councils, mittees	
es	$ 29-39
les	$ 39-49
s	$ 45-49
s	$104 2-rm
	$148 3-rm
	.....The Warwick Hotel
iary Meetings	
es	$ 30-45
les	$ 45-55
s	$ 45-55
s	$100 up 2-rm
C	.....Holiday Inn Medical Center
ntific Sessions	
es	$ 24
les	$ 28
s	$ 28
	.....Tidelands Motor Inn
es	$ 24-28
les	$ 26-31
s	$ 25-38
es	$ 55 up 2-rm
	.....Tides II Motor Inn
es	$ 26-32
les	$ 29-35
s	$ 36-42
es	$ 55 up 2-rm
	$125 3-rm

FILLED

• PLEASE READ CAREFULLY •

- Please PRINT or TYPE all items to assure accuracy.
- Complete each part below in detail for correct and rapid computer processing.
- Only one room per form.
- ALL confirmations will be sent to individual indicated in Part I.

PART I

INSTRUCTIONS: Complete requested data using abbreviations as necessary.

(NAME OF PERSON REQUESTING ROOM/S)

(LAST) (FIRST NAME)

(NAME OF COMPANY OR FIRM)

(STREET ADDRESS OR P. O. BOX NUMBER)

(CITY) (STATE) (ZIP — U.S.A.)

(COUNTRY (Area Code) (PHONE NUMBER)

PART II

INSTRUCTIONS: 1. Select three hotels from the list provided on the left side of this form, then enter the appropriate code letters in the boxes below.

FIRST CHOICE	SECOND CHOICE	THIRD CHOICE
HOTEL CODE	HOTEL CODE	HOTEL CODE

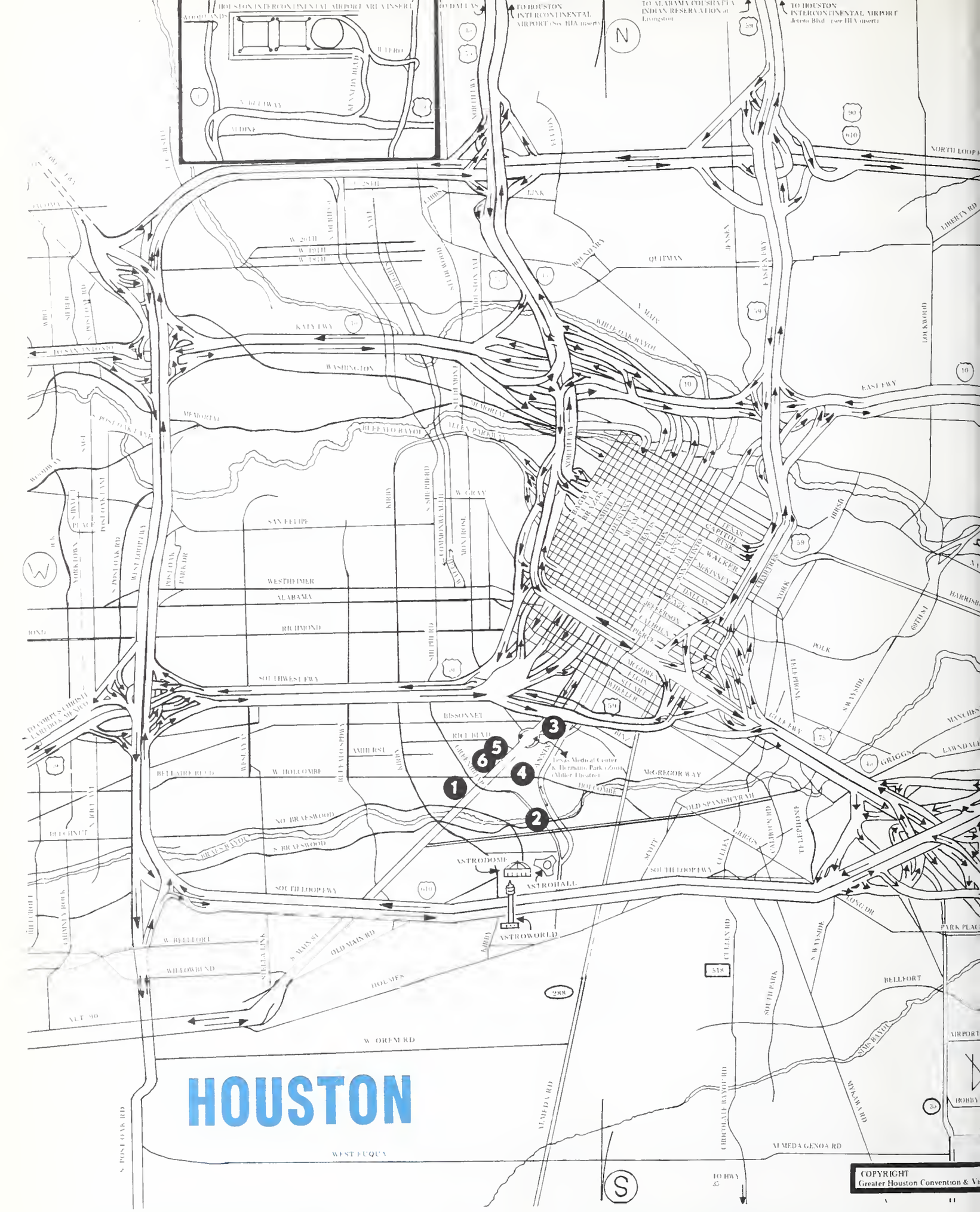
PART III

INSTRUCTIONS:
1. **Print** or **type** names of all persons occupying room.
2. Check type room desired (single, twin, etc.).
3. Indicate arrival and departure dates.

GUEST NAME/S (PRINT LAST NAME FIRST)	P+1 — Parlor & one bedroom P+2 — Parlor & two bedrooms
1.	CHECK ONE ☐ SINGLE ☐ P+1 ☐ DOUBLE ☐ TWIN ☐ P+2
2.	ARR. DATE _____ DEP. DATE _____
3.	ARRIVAL TIME _____ ☐ AM ☐ PM (Check One)
4.	**NOTE:** ROOM WILL NOT BE HELD AFTER 6 P.M. UNLESS PAYMENT IS GUARANTEED FOR FIRST NIGHT. HOTEL MAY REQUIRE DEPOSIT.

FOR USE OF ASSN. ONLY

ROOM RESERVATIONS MUST BE RECEIVED BY APRIL 25. CONFIRMATION CANNOT BE GUARANTEED ON RESERVATIONS RECEIVED AFTER THAT DATE.



1. **SHAMROCK HILTON HOTEL**
   Scientific Sessions and exhibits
2. **HOUSTON MARRIOTT HOTEL**
   House of Delegates, Boards, Councils, Committees
3. **THE WARWICK HOTEL**
   Auxiliary Meetings
4. **HOLIDAY INN MEDICAL CENTER**
   Scientific Sessions
5. **TIDELANDS MOTOR INN**
6. **TIDES II MOTOR INN**

MEDICINE AND THE LAW

PHYSICIAN'S LIABILITY IN THE PHYSICAL EXAMINATION OF AN EMPLOYEE

A Texas Court of Civil Appeals[1] has ruled that a physician employed by a business to examine an employee and to report the results can be sued by the employee on the basis of a negligent[2] examination report.

Facts

Dr Morgan was employed by the Zale Corporation to perform a physical examination of Armstrong, a Zale employee who was being promoted to vice president of credit, and to report the results. Dr Morgan's report indicated that Armstrong was in very bad physical condition.

In his suit against Dr Morgan for money damages, Armstrong claimed that Dr Morgan was negligent in his diagnosis because he did not exercise reasonable attention, observation, and skill in conducting the physical examination. Armstrong claimed that this negligently inaccurate and improper diagnosis resulted in damages because he lost his promotion and his job when the report was received by Zale.

Ruling

The trial court granted Dr Morgan's motion for summary judgment in his favor. On appeal the Texarkana Court of Civil Appeals reversed and sent the case back for trial.

Based upon the conclusion that Dr Morgan had a duty not to injure Armstrong "physically or otherwise," the court declared: "If Dr Morgan negligently performed the examination and as a result gave an inaccurate report of the state of (Armstrong's) health, and (he) was injured as a proximate result thereof, actionable negligence would be shown . . . Those questions are fact issues."

Addressing the judicial process of resolving whether or not a defendant owes a "duty" to the plaintiff in any given context, the court quoted from a prominent tort law scholar, Wm. L. Prosser, as follows: "The problem of duty is as broad as the whole law of negligence, and . . . no universal test for it has ever been formulated . . . It is imbedded far too firmly in our law to be discarded, and no satisfactory substitute for it, by which the defendant's responsibility may be limited, has been devised. But it should be recognized that duty . . . is not sacrosanct in itself but only an expression of the sum total of those considerations of policy which lead the law to say that the particular plaintiff is entitled to protection . . . No better general statement can be made, than that the courts will find a duty where, in general, reasonable men would recognize it and agree that it exists."

No appeal to the Texas Supreme Court was filed.

Discussion

Generally, Texas law requires a physician-patient relationship as a prerequisite to a medical malpractice suit based on negligence, and such a relationship is dependent upon contract.

Absent a contractual physician-patient relationship, the doctor generally owes no legal duty to provide medical services and correspondingly cannot be held legally liable for a failure to do so. There is, however, a countervailing consideration in tort law that a person who does something which he had no duty to do can be liable for negligence involved.

In a prior case, *Lotspeich*,[3] a Texas Court of Civil Appeals held that a physician employed to perform a pre-employment physical examination owed no duty to the prospective employee to discover that she had tuberculosis, and that without such a duty

on the examining doctor's part, there could be no actionable negligence in his failure to discover the presence of that disease.

In that case, the court decided that there was no duty on the doctor to do anything except to perform efficiently the work the company had employed him to do. The court also decided that the job applicant had no legal right to demand that the doctor exercise any particular standard of care in conducting the examination, other than to avoid injuring her.

However, another prior case, *Childs*,[4] held that a nurse on duty in an emergency room had a legal duty to correctly relay the message she received from a doctor to a woman seeking admission to the hospital. The court reasoned that the nurse's relation to that woman was "attendant with responsibility," and that a nurse in such position had a duty, when all the circumstances are considered, of accurately reporting the message the doctor told her to deliver in connection with denying admission.

Dr Morgan contended that the *Lotspeich* holding controls the disposition of this case, reasoning that he owed no duty of care to Armstrong except not to injure him.

Declining to thus limit the duty of an examining physician, the court concluded that Dr Morgan had a duty not to injure Armstrong "physically or otherwise."

Conclusion

Where a physician is employed to make a physical examination of an "employee" (whether applicant or promotee) and a report results to the employer, it seems a fine line to draw between "no duty" to the employee regarding a failure to diagnose/report existent tuberculosis, versus "duty" to the employee with respect to mis-diagnosing/reporting the state of his physical condition.

But, since this fine line exists under present case law, physicians who perform physical examinations for various "third parties" should be cognizant of this kind of liability exposure.

Will Barber, Ace Pickens
Brown, Maroney, Rose, Baker & Barber
TMA Legal Counsel

---

[1]*Armstrong v. Morgan,* No. 8406, Texarkana Court of Civil Appeals (December, 1976).
[2]This case is also based on a libel theory.
[3]*Lotspeich v. Chance Vought Aircraft*, 369 S.W.2d 705 (Dallas Civ. App. 1963, writ ref., n.r.e.).
[4]*Childs v. Greenville Hospital Authority*, 479 S.W.2d 399 (Texarkana Civ. App. 1972, writ ref., n.r.e.).

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

TEXAS REPRESENTATIVES

A. F. Ennis, Jr. and B. C. Crim, Suite 210, 712 N. Woshington, Dollas 75246	Telephone (214) 821-4640
W. L. Kirk, 1508 Hermann Prof. Bldg., Houston 77030	Telephone (713) 797-9835
M. C. Rollons, 408 GPM Bldg., South Tower, Son Antonio 78216	Telephone (512) 344-5901

KELSEY-SEYBOLD CLINIC

TEXAS MEDICAL CENTER ● 6624 FANNIN STREET ● HOUSTON, TEXAS 77030 ● AC (713) 797-1551

INTERNAL MEDICINE

Allergy
C. W. Ewing, M.D., F.A.C.A.

Arthritis and Rheumatic Diseases
J. W. Kemper, M.D., F.A.C.P.
M. S. Fischer, M.D.

Cardiology
E. F. Beard, M.D., F.A.C.P.
D. D. Goulden, M.D.
M. J. Mihalick, M.D.

Endocrine and Metabolic Diseases
M. P. Kelsey, M.D., F.A.C.P.
A. E. Leiser, M.D., F.A.C.P.
P. K. Champion, Jr., M.D., F.A.C.P.

Gastrointestinal Diseases, Endoscopy
J. R. Kelsey, Jr., M.D., F.A.C.P.
P. S. Bentlif, M.D., F.A.C.P.
R. D. Eichhorn, M.D., F.A.C.P.
F. S. O'Neil, M.D., F.A.C.P.
J. W. McBee, M.D., F.A.C.P.

General Internal Medicine
G. E. Burke, M.D.
C. F. Taboada, M.D., F.A.C.P.
N. H. Nauert, Jr., M.D.
G. G. Bourianoff, M.D.

Hematology
J. B. Bart, M.D., F.A.C.P.

Infectious Diseases
S. Riggs, M.D., F.A.C.P.

Nuclear Medicine
D. E. Mouton, M.D., F.A.C.N.M.

Oncology
E. N. Root, M.D.

Pulmonary Diseases, Bronchoscopy
S. P. Fischer, M.D., F.A.C.P.
B. D. Walker, M.D.

DERMATOLOGY

W. M. Fraser, M.D., F.A.A.D.
D. W. Owens, M.D., F.A.A.D.

GENERAL & THORACIC SURGERY

Surgical Endoscopy & Colonoscopy
W. D. Seybold, M.D., F.A.C.S.
J. D. McMurrey, M.D., F.A.C.S.
J. L. Doggett, M.D., F.A.C.S.
M. F. Appel, M.D., F.A.C.S.

NEUROLOGY

R. R. Pierce, M.D., F.A.A.N.
W. R. Seybold, M.D.

OBSTETRICS & GYNECOLOGY

M. L. Cody, M.D., F.A.C.S., F.A.C.O.G.
W. A. Johnson III, M.D., F.A.C.O.G.

OCCUPATIONAL & PREVENTIVE MEDICINE

M. B. Johnston, M.D., F.A.C.Pr.M.
H. B. Elwell, Jr., M.D.
R. M. Fenno, M.D., F.A.C.P.
F. A. Goss, M.D.
W. R. Hawkins, M.D., F.A.C.Pr.M.
W. R. Hein, M.D.
L. A. Herrmann, M.D.
G. F. Kelly, M.D., F.A.C.Pr.M.
J. Mackay, M.D.
C. A. Owen, M.D., F.A.C.S.
C. G. Petry, M.D.
B. W. Prior, M.D., F.A.C.Pr.M.
N. A. Tadros, M.D., F.A.C.Pr.M.
A. M. Wyss, M.D., F.A.C.Pr.M.
R. M. Boozer, M.D.

OPHTHALMOLOGY

H. E. Wahlen, M.D., D.A.B.O.
J. E. Key, II, M.D.

ORTHOPEDIC SURGERY

R. A. Fulford, M.D., F.R.C.S. (C)
T. H. Crouch, M.D., F.A.C.S.

OTOLARYNGOLOGY

J. C. Dickson, M.D., F.A.C.S.
J. L. Smith, M.D., F.A.C.S.
L. P. Conrad, M.D.

PATHOLOGY

R. A. Jordan, M.D., F.A.S.C.P.

PEDIATRICS

Rheumatology
E. J. Brewer, Jr., M.D., F.A.A.P.

Allergy and Pulmonary Diseases
C. W. Ewing, M.D., F.A.A.P.

Gastroenterology
G. D. Ferry, M.D., F.A.A.P.

General Pediatrics and Consultation
F. J. Boland, M.D., F.A.A.P.
R. M. Thaller, M.D., F.A.A.P.
K. C. Pinckard, M.D.

PSYCHIATRY

C. G. Cochran, M.D.
R. Daichman, M.D.

RADIOLOGY

R. J. Kurth, M.D., F.A.C.R.
E. G. Linares, M.D.
P. Raphael, M.D.

UROLOGY

D. W. Pranke, M.D., F.A.C.S.
F. M. Fry, M.D.

DENTISTRY

J. W. Orr, D.D.S.
D. L. McClung, D.D.S.

SPEECH PATHOLOGY & AUDIOLOGY

D. R. Fox, Ph.D.
J. W. Porter, M.A.
N. Shulak, M.A.

EXECUTIVE DIRECTOR

J. A. Bakken, F.A.C.M.G.A.

K-S POST OAK

Post Oak Tower Building, Suite 385
5051 Westheimer
Houston, Texas 77027
(713) 622-8340

K-S WEST

1900 Yorktown, Houston, Texas
77024 (713) 622-8211

K-S DOWNTOWN

Two Houston Center, Suite P-310
909 Fannin Street, Houston, Texas
77002 (713) 654-4401

Medicine in literature

EDITOR'S NOTE: This month's bibliography, prepared by the staff of TMA's Memorial Library, lists publications related to parenteral feeding. These and other publications pertaining to this topic are available from the Memorial Library.

PARENTERAL FEEDING

Ahnefeld FW (ed): *Parenteral Nutrition.* Berlin, Springer, 1976. WB 410 I43 1974.

American Medical Association. Symposium on total parenteral nutrition, sponsored by Food Science Committee, Council on Foods and Nutrition, American Medical Association, Nashville, Tenn, Jan 17-19, 1972. Chicago, 1972. WB 118 Am3 1972.

Catalano JD, Monteleone JA: Cortical cataracts following total parenteral nutrition. *Birth Defects* 12(5):39-43, 1976.

Fazio VW, Kodner I, Jagelman DG, et al: Parenteral nutrition as primary or adjunctive treatment. *Dis Colon Rectum* 19(7): 574-578, 1976.

Fleming CR, McGill DB, Hoffman HN II, et al: Total parenteral nutrition. *Mayo Clin Proc* 51:187-199, March 1976.

Heird WC, Winters RW: Total intravenous alimentation in pediatric patients. *South Med J* 68(9):1173-1176, 1975.

Hunt JA, Goodwin NM: Total parenteral nutrition; a review. *S Afr Med J* 49(50): 2093-2098, 1975.

Jeejeebhoy KN, Langer B, Tsallas G, et al: Total parenteral nutrition at home: Studies in patients surviving 4 months to 5 years. *Gastroenterology* 71(6):943-953, 1976.

Lee HA: Planning intravenous nutrition, techniques and principles. *S Afr Med J* 50(42):1725-1733, 1976.

Meng HC: Parenteral nutrition: Principles, nutrient requirements, and techniques. *Geriatrics* 30(9):97-102, 107, 1976.

Okada A, Takagi Y, Itakura T, et al: Skin lesions during intravenous hyperalimentation: Zinc deficiency. *Surgery* 80(5):629-635, 1976.

Seashore JH, Seashore MR: Protein requirements of infants receiving total parenteral nutrition. *J Pediatr Surg* 11(5): 645-654, 1976.

Sorg JL: A protocol for hyperalimentation in a community hospital. *Am Surg* 42(9): 716-724, 1976.

Wilmore DW, Moylan JA, Helmkamp GM, et al: Clinical evaluation of a 10% intravenous fat emulsion for parenteral nutrition in thermally injured patients. *Ann Surg* 178(4):503-513, 1973.

IN THE TMA LIBRARY

Borges AF: *Elective Incisions and Scar Revision.* Boston, Little, Brown & Co, 1973.

Lewis CE, Fein R, Mechanic D: *A Right to Health.* New York, John Wiley & Sons, 1976.

Maibach HI, Rovee DT (eds): *Epidermal Wound Healing.* Chicago, Year Book Medical Publishers, Inc, 1972.

Meng HC, Wilmore DW (eds): *Fat Emulsions in Parenteral Nutrition.* Chicago, American Medical Association, 1976.

Meschan I, Farrer-Meschan RMF: *Analysis of Roentgen Signs in General Radiology, I, II, III.* Philadelphia, WB Saunders Co, 1973.

De Nicola P, Morsiana M, Zavagli G: *Nail Diseases in Internal Medicine.* Springfield, Ill, Charles C Thomas, 1974.

Northern JL, Downs MP: *Hearing in Children.* Baltimore, Md, Williams & Wilkins Co, 1974.

Rosenthal MP: *Interpretation of the Mental Health Code,* ed 5. Hogg Foundation for Mental Health, 1976.

Selzer A: *Principles of Clinical Cardiology.* Philadelphia, WB Saunders Co, 1975.

Spellacy WN: *Management of the High-Risk Pregnancy.* Baltimore, Md, University Park Press, 1976.

Texas Medical Professional Liability Study Commission: *Final Report of the Texas Medical Professional Liability Study Commission to the 65th Texas Legislature.* December 1976.

The Nation's Use of Health Resources, 1976 ed. US Department of Health, Education, and Welfare Publication No (HRA) 77-1240.

Weatherall DJ, Clegg JB: *The Thalassaemia Syndromes,* ed 2. Oxford, England, Blackwell Scientific Publications, 1972.

Weissler AM (ed): *Noninvasive Cardiology.* New York, Grune & Stratton, 1974.

"The ten year follow-up on my cases of diaper rash proved to be very gratifying."

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

Ellen D. Furey
Beaumont, 1903-1976

Walter L. Garnett
Dallas, 1884-1976

L.E. Lundgren
Houston, 1920-1976

Julius McIver
Dallas, 1888-1976

O.H. Trimble
Wichita Falls, 1913-1976

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

TEXAS MEDICAL MEMORIAL LIBRARY FUND

1801 N. Lamar Blvd., Austin, Texas 78701

I enclose the amount of $_____. Given in Memory of _____

Please send remembrance card to:

Name _____

Address _____

City and State _____

Donor Information:

Name _____

Address _____

City and State _____

Deaths

Ellen D. Furey, MD

Dr Ellen Dora Furey, 72, died Aug 7, 1976, in Beaumont.
Dr Furey was a native of Beaumont. She practiced in San Antonio and San Angelo before returning to Beaumont in 1941. She retired in 1970 following 40 years as a pathologist.
She was graduated from Our Lady of the Lake College, San Antonio, in 1924. In 1930, Dr Furey completed her medical education at The University of Texas Medical Branch, Galveston. Her internship was at the University of Minnesota Affiliated Hospitals, Minneapolis, during 1933-1934. She also undertook postgraduate studies at the University of Minnesota and the Mayo Graduate School of Medicine, Rochester, Minn.
The physician's professional memberships included the American Society of Clinical Pathologists, Texas Society of Pathologists, College of American Pathologists (founding fellow), and the American Medical Association. She was past president of both Jefferson County Medical Society and the Hotel Dieu Hospital staff, Beaumont. She also was a member of Alpha Omega Alpha.
Dr Furey is survived by her niece, Patricia Schwarz, Villa Park, Ill.

W.L. Garnett, MD

Dr Walter L. Garnett, a retired obstetrician-gynecologist, died June 5, 1976, in Dallas. He was 92 years of age.
Dr Garnett was born in Brownwood, Tex. He received his BA degree from The University of Texas in 1907. In 1913, he was graduated from The University of Texas Medical Branch, Galveston.
From 1918 to 1922, Dr Garnett was the chief of staff of the American Hospital in Tampico, Mexico. During 1922-1924, he was involved in postgraduate study at the University of Pennsylvania, where he was awarded the MS degree.
The doctor's professional memberships included the Bexar County Medical Society and American Medical Association.
Surviving Dr Garnett are his son, Walter L. Garnett, Jr, Sierra Vista, Ariz; and daughters, Carolyn Wolf, Dallas, and Jane Putnam, New Canaan, Conn.

Dr Furey

L.E. Lundgren, MD

Dr Lawrence Edward Lundgren, a Houston obstetrician-gynecologist, died Aug 22, 1976, at his residence. The author of several scientific articles and a pioneer in abdominal decompression, Dr Lundgren had lived in Houston since 1959.
Dr Lundgren, 55, was born in St Albans, Vt. His preliminary education was in Plattsburg, NY, and he was graduated from Tufts University, Medford, Mass, in 1941. In 1944 he completed his medical education at McGill University, Montreal.
Dr Lundgren continued his education as an intern at Montreal General Hospital. He held residencies at Hackensack (NJ) Hospital (1947-1948) and Lawrence Hospital, Bronxville, NY. He also did postgraduate work at the Margaret Hague Maternity Hospital in Jersey City, NJ, during 1949-1952.
The physician served in the US Air Force as a captain from 1945 through 1947. His professional memberships included the Harris County Medical Society, American Medical Association, Osler Society, Ameri-

Dr McIver

can Society of Abdominal Surgeons and American Association of Obstetricians and Gynecologists.
Surviving Dr Lundgren are his wife, Mary Frances Knowles Lundgren, Houston; sons, Christian Stewart Lundgren and Jay Andrew Lundgren.

Julius McIver, MD

Dr Julius McIver, 88, a charter member and past president of the Texas Association of Obstetricians and Gynecologists, died Sept 7, 1976, in Dallas.
Dr McIver moved to Dallas in 1920. For more than 15 years he served as student health physician at Southern Methodist University. He had been a member of the attending staffs at St Paul Hospital and Parkland Memorial Hospital and taught obstetrics at The University of Texas Southwestern Medical School for 10 years.
He was a native of Madison County, Texas, and was graduated from The University of Texas Medical Branch, Galveston, in 1912.
Dr McIver was in general practice in Gainesville, Tex, for eight years before moving to Dallas.
Dr McIver was a member of the Central and Dallas-Fort Worth Associations of Obstetricians and Gynecologists and Dallas Southern Clinical Society. He was elected to honorary membership in Dallas County Medical Society, Texas Medical Association and the American Medical Association.
Surviving Dr McIver are his wife, Marguerite Blanton McIver, Dallas; daughters, Marie McIver Wilhite, Mt Pleasant, Tex, and Virginia McIver Fults, Dallas; son, Ralph McIver, Houston; eight grandchildren and eight great-grandchildren.

O.H. Trimble, MD

Dr Orman Hughes Trimble, a Wichita Falls surgeon, died Sept 15, 1976, at the age of 63.
He had resided in Wichita Falls 28 years and was on the surgical staffs of Wichita General and Bethania hospitals. He also was consulting surgeon for Wichita Falls State Hospital and Sheppard Air Force Base Regional Hospital.
Dr Trimble was born in Point Comfort, Tex, and received his preliminary education in Greenville, Tex. He attended Southern Methodist University three years before entering Baylor College of Medicine. He received his MD degree in 1938.
The surgeon served his internship and residency at Charity Hospital in Shreveport, La. He also undertook postgraduate studies at the Ochsner Foundation in New Orleans.
Dr Trimble was a member of the Army Medical Corps from 1941 until 1946. While in the Army he achieved the rank of lieutenant colonel. He was assistant chief of surgery at Camp Wolters, Tex, and chief of surgical service of the 35th General Hospital in the Southwest Pacific.
He was a member of the Wichita-Young-Archer-Jack County Medical Society, John Hunter Surgical Society of Texas and American College of Surgeons (fellow).
He also was a member of Phi Chi medical fraternity.
Surviving Dr Trimble are his wife, Mary Alexander Trimble, Wichita Falls; daughters, Mrs Tommy Fire, Carrollton, Tex, and Mrs Mark Brown, Wichita Falls; mother, Mrs W.C. Trimble, Athens, Tex; and brother, Jack Trimble, also of Athens.

BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT-OUTPATIENT
DEPARTMENT OF ADOLESCENT PSYCHIATRY

A Private 82 bed psychiatric hospital located in Oak Cliff on 18 acres amidst natural wooded surroundings. A multi-approach treatment center of neurologic and all psychiatric disorders. Treatment modalities include Somatic Therapy, Milieu Therapy, Chemotherapy, Individual and Group Therapy and Behavior Modification. Complete facilities for OT-RT under the direction of trained personnel. An individually directed program based on full diagnostic evaluation and actual performance administered by a staff skilled in special education and problems of the adolescent and young adult.

PSYCHIATRY

Jackson H. Speegle, M.D.
Fred H. Jordan, M.D.

Joseph H. Lindsay, M.D.
John T. Holbrook, M.D.

PSYCHOLOGY

George R. Mount, Ph.D.

Tom I. Payton, M.S.
Patrick R. Barnes, M.S.

DIRECTOR OF NURSES
Nita Ivey, R.N.

DIRECTOR OF EDUCATION
William E. Nix, Ph.D.

SOCIAL SERVICES
Beth Rutherford, M.S.W.

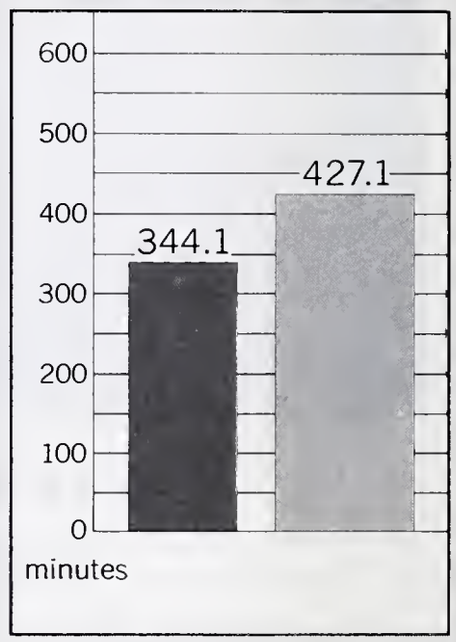
COURTESY STAFF

O.T. AND R.T. THERAPY
Director
Chequita Dian Badger, B.S.

1353 N. WESTMORELAND AVENUE. DALLAS, TEXAS 75211 **214 331-8331**

Proof of effectiveness in 6 elderly Texans with insomnia

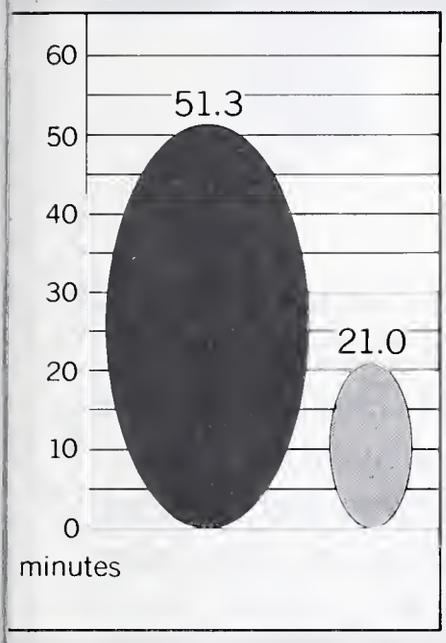
Average increase in total sleep time: 83.0 minutes



Elderly insomniac patients slept appreciably longer, fell asleep faster, spent less time awak during the night[1]

Six elderly insomniac females, average age 74, received Dalmane (flurazepam HCl) 15 mg for seven consecutive nights in the sleep research laboratory of a major university medical center in Texas. Every patient improved clinically in the two insomnia parameters shown above, and also spent less time awake after sleep onset. The greater the degree of insomnia any patient experienced before Dalmane, the greater the improvement with Dalmane. Efficacy was undiminished over the entire medication period.

Average decrease in sleep latency: 30.3 minutes



Dalmane (flurazepam HCl) is relatively safe, even for patients on chronic warfarin therapy

Morning "hang-over" has been relatively infrequent with Dalmane. The usual adult dosage is 30 mg *h.s.*; however, in elderly and debilitated patients, start with 15 mg to help preclude oversedation, dizziness or ataxia. Dalmane may be used in patients on chronic warfarin therapy; no unacceptable fluctuation in prothrombin time has been reported.[2,3]

■ Pretreatment

□ DALMANE (flurazepam HCl) 15 mg

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

Usage in Pregnancy: **Several studies of minor tranquilizers (chlordiazepoxide, diazepam, and meprobamate) suggest increased risk of congenital malformations during the first trimester of pregnancy. Dalmane, a benzodiazepine, has not been studied adequately to determine whether it may be associated with such an increased risk. Because use of these drugs is rarely a matter of urgency, their use during this period should almost always be avoided. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, limit initial dosage to 15 mg to preclude oversedation, dizziness and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

References:
1. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
2. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
3. Robinson DS, Amidon EL: Interaction of benzodiazepines with warfarin in man, in *The Benzodiazepines*, edited by Garattini S, Mussini E, Randall LO. New York, Raven Press, 1973, p. 641

Objective proof offered by no other sleep medication

Dalmane®
(flurazepam HCl)®IV

One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.
One 30-mg capsule *h.s.* — usual adult dosage (15 mg may suffice in some patients).

ROCHE
ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Texas medicine is in danger.

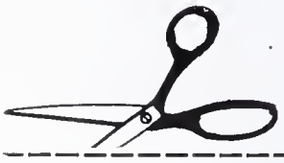
New pamphlets from TMA can gain support for needed malpractice insurance legislation—but only if you order them.

These new pamphlets can help get meaningful legislation passed. Thousands of people have sent in coupons from TMA's previous pamphlet. This new one can be just as successful.

Display holds 50 pamphlets.

Give patients a chance to support SB 103 and HB 370. Put pamphlets in statements, waiting rooms and hospitals. Pass them out at meetings or use them many other ways.

An 8½ x 11 inch display card with a holder for pamphlets also is available. It's the same successful holder offered last year. If you already have one, just put in new pamphlets. You can fold out the attached brace for tabletop use. Or hang the attractive gray and white holder on a wall.



Use this easy order form.

TO: Communication Department
Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

Yes, I want to help tell people about the "malpractice insurance" crisis and the legislation needed to resolve it. Please send, free of charge:

_____ Pamphlets—"Texas Medicine is in Danger."
(No.)

_____ Table display(s) with pamphlet holder. Supply is limited on this item. It is identical to the one offered last year. One display holds about 50 pamphlets.
(No.)

Send to:
(print or type)

_____
(Name)

_____
(Address)

_____
(City, state, zip)

***COMPULSION/ an irresistible impulse to perform an irrational act.**

Excessive drinking . . . leading to alcohol addiction . . . can't be controlled successfully unless the **compulsion** is destroyed.

Schick Hospital is a confirmed leader in modifying compulsive behavior and replacing it with **rational thinking and behavior.**

Aversive conditioning has been found to be the fastest, most effective means of breaking up compulsive drinking. Combined with rational behavior therapy, over half of the individuals who take a two-week re-education program never take nor feel the need to take another drink.

A 100% medically oriented program in a first class hospital fully accredited by the Joint Commission on Accreditation of Hospitals, and a Blue Cross-Blue Shield Member Hospital. Health and hospitalization insurance approved, including CHAMPUS.

SCHICK HOSPITAL

4101 Frawley Drive · Fort Worth, (D/FW Mid-Cities) 76118
Call for 24 hour information: Fort Worth (817) 284-9217 · Dallas (214) 589-0444

COMING SOON. Hospital programs for compulsive eaters and overweight individuals.
Hospital programs for compulsive smokers with pulmonary and cardiovascular disorders.

*Webster's New Collegiate Dictionary

MEDICAL ARTS CLINIC ASSOCIATION of corsicana

DERMATOLOGY & SYPHILOLOGY
JOSEPH M. GLICKSMAN, M.D., F.A.A.D.*
J. D. SMITH, M.D., F.A.A.D.*

EAR, NOSE, & THROAT
PHILLIP M. AWTREY, M.D., F.A.A.O.O.*

GENERAL & VASCULAR SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D., F.A.C.S.*

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
ALLEN M. JONES, M.D.*
JOHN D. NELSON, M.D.*
L. BRYAN COTTON, JR., M.D.*
KENT ROGERS, M.D.

FAMILY PRACTICE DEPARTMENT
ENNIS, TEXAS
W. B. KINZIE, M.D.*

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
W. GENE MURFF, M.D., F.A.C.O.G.*
NEAL GREEN, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D., F.A.A.O.O.*

ORTHOPAEDIC SURGERY
WALLACE E. LOWRY, JR., M.D.*
JAMES A. DOTSON, M.D.*

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D., F.A.A.P.*

UROLOGY
WILLIAM V. HALL, M.D.*

EXECUTIVE DIRECTOR
DON L. BOWEN, M.G.M.A.

* DIPLOMATE OF THE AMERICAN BOARD

TRAVIS CLINIC FOUNDATION AND TRAVIS CLINIC ASSOCIATION

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D., Emeritus
Ken E. Kuykendall, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
Mary A. Bone, M.D.
J. A. Armstrong, M.D.
D. B. Turner, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Dermatology:
T. S. Arrington, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

Podiatry:
Daniel H. Phelps, D.P.M.

Psychology:
Charles T. Fries, Ed.D.

Business Manager:
Gerald L. Burks

We have your best interest at heart.

Give Heart Fund
American Heart Association

Texas Physicians' Directory

DIRECTORY RATES & DATA: Space is available to TMA members at $12.50 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. Section headings are limited to those specialties designated by the American Medical Association. A list of these specialties is available upon request. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Clinics

THE FORT WORTH CLINIC

1221 West Lancaster Avenue, Fort Worth, Texas 76102
Telephone 817 336-7191

INTERNAL MEDICINE
Kendra J. Belfi, M.D.
John M. Church, M.D.
Thomas J. Coleman, M.D.
Robert R. Dickey, M.D.
Ferd E. Garrison, Jr., M.D.
Cortell K. Holsapple, M.D.
John E. Johnson, Jr., M.D.
O. M. (Jack) Phillips, M.D.

GENERAL SURGERY
John H. Sewell, M.D.
Robert L. Sewell, M.D.

ORTHOPEDIC SURGERY
Thomas E. Rapp, M.D.

CONSULTANTS IN RADIOLOGY
Victor E. McCall, M.D.
Dixon Presnall, M.D.
Harry H. Whipp, M.D.

FIFTH AVENUE CLINIC

650 Fifth Avenue, Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

THOMAS-SPANN CLINIC

1533 South Brownlee, Corpus Christi, Texas 78404
Telephone 883-7411

FAMILY MEDICINE
Travis B. Phelps, M.D., F.A.A.F.P.
T. D. Harvey, M.D., A.B.F.P.
H. R. Rose, M.D., A.B.F.P.
C. L. Vernor, M.D.
Frederick S. Maurer, M.D.

ORTHOPEDICS
C. M. Yanez, M.D., F.A.C.S.

INTERNAL MEDICINE
G. A. Reeves, M.D.
Pruett Moore, Jr., M.D.
Mark G. Strauss, M.D.

ADMINISTRATOR
Gene Hybner

DIRECTOR OF NURSES
Pat Parker, R.N.

Remind your colleagues of your specialty and office location.
Purchase a listing in the "Texas Physicians' Directory."

BEELER-MANSKE CLINIC

9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

INTERNAL MEDICINE
C. M. Maruri, M.D.
A. J. Nodarse, M.D.

GENERAL SURGERY
B. W. Hink, M.D., F.A.C.S.

FAMILY MEDICINE
J. H. Cochrane, Jr., M.D., F.A.A.F.P.
J. W. O'Bryant, M.D.
A. A. Piske, M.D.

FAMILY MEDICINE AND GENERAL SURGERY
Salvador Faus, M.D.

CLINIC MANAGER
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

MALONE AND HOGAN CLINIC

1501 West 11th Place, Big Spring, Texas 79720, Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.
W. B. Allensworth, M.D.

GENERAL SURGERY
C. B. Marcum, M.D., F.A.C.S.
J. E. Mathews, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
C. T. Moore, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
D. M. Logan, M.D.
V. T. Smith, M.D.

FAMILY PRACTICE
W. R. Strahan, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.
J. W. Kuykendall, M.D.

PEDIATRICS
J. M. Woodall, M.D.
B. R. Owen, M.D., F.A.A.P.

RADIOLOGY & NUCLEAR MEDICINE
Buerk Williams, M.D.
A. P. Goswami, M.D.

UROLOGY
G. F. Dillon, M.D., D.A.B.U.
J. W. Cowan, M.D.

DERMATOLOGY
H. K. Butler, M.D.

PODIATRY
Bradford Glass, D.P.M.

PATHOLOGY
B. A. Campomanes, M.D.

CONSULTANT IN ELECTROENCEPHALOGRAPHY
M. L. Proler, M.D.

ADMINISTRATION
R. L. Heith, Administrator
Charles N. Butts, Fiscal Officer
H. L. Mott, Office Manager
Danny Nichols, Comptroller

RUGELEY AND BLASINGAME CLINIC

2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Richard R. Raphael

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.

DERMATOLOGY
T. S. Arrington, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

ANESTHESIOLOGY
C. G. Spears, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77030
Telephone 713 797-9191

Internal Medicine and Diagnosis

ALLERGY
Arthur T. Pedersen, M.D.

CARDIOVASCULAR DISEASE
Thomas J. Fatherree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.
Boguslaw Godlewski, M.D.
Matthew T. Monroe, M.D.

DERMATOLOGY
Samuel F. Bean, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Raymond L. Gregory, M.D.
R. Frederick Gregory, M.D.
Thomas J. Hanson, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.
Michael Gagliardi, M.D.
James K. Gordon, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George T. Conklin, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
George Burnazian, M.D.
Benjamin L. Portnoy, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.
James V. Ryan, M.D.

NEPHROLOGY
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

NEUROLOGY
Donald J. Russell, M.D.
George Isaacs, M.D.
Ernesto Infante, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.
Harry R. Price, M.D.
Edward L. Middleman, M.D.
Martin J. Hrgovic, M.D.

PATHOLOGY
Paul B. Radelat, M.D.
Ashok M. Balsaver, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.
Martin L. Kaplan, M.D.
Louis C. Waddell, Jr., M.D.

RADIOLOGY
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.
Joe B. Wilson, M.D.
Howard J. Pollock, M.D.

NUCLEAR MEDICINE
Donald A. Podoloff, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
Robert B. Hall,
Administrator
Richard V. Vanderslice,
Assistant Administrator

HOUSTON HEADACHE CLINIC
Park Plaza Professional Building
1213 Hermann Drive, Suite 855
Houston, Texas 77004
(713) 528-1916

Neurology
Ninan T. Mathew, M.D., F.R.C.P.(C)

Allergy

PETER B. KAMIN, M.D., P.A.
Certified American Boards of Pediatrics and Allergy
Diplomate American Board of Allergy and Immunology

Allergy and Immunology

Suite 601, Oak Hills Medical Building
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Phone 512 696-4405 or 227-6331

HOUSTON ALLERGY CLINIC
Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Richard H. Jackson, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Warren J. Raymer, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
D. W. Waddell, M.D., F.A.A.C.I.A.
Ramon Garrido, M.D., F.A.C.A., F.A.A.C.I.A.*
(Certified American Board of Pediatrics)
*Diplomate American Board of Allergy & Immunology

Suite 444, Hermann Professional Building
6410 Fannin St., Houston, Texas 77030, 713 797-0900

TMA Group Insurance Plans
. . . Another service of your association

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

JOHN P. McGOVERN, M.D.
Director-Consultant

THEODORE J. HAYWOOD, M.D.
ORVILLE C. THOMAS, M.D.
JOSEPH T. QUENG, M.D.
LAWRENCE G. THORNE, M.D.
K. VENUGOPALAN, M.D.
ROBERT E. SMITH, M.D.
JAMES A. AYERS, M.D.
EUNICE W. CHOU, M.D.
ALBERT LEHMANN, M.D.
GERALD T. MACHINSKI, M.D.

Research Associates
MICHAEL H. SMOLENSKY, Ph.D.
ALAIN REINBERG, M.D., Ph.D.
CALVIN J. McLERRAN, Ph.D.
MICHAEL A. McCORMICK, Ph.D.
GLENNA M. KYLE, M.S.
ITING MAY LU, M.S.

Consultants

EVAN M. HERSH, M.D.
JUDITH H. MARSTON, Ph.D.
Immunology

JAMES A. KNIGHT, M.D.
Psychiatry

HERBERT C. McKEE, Ph.D.
RICHARD K. SEVERS, Ph.D.
Air Pollution

CAROLYN S. LEACH, Ph.D.
Clinical Laboratories

JOHN A. THOMAS, Ph.D.
Clinical Pharmacology

THOMAS D. DOWNS, Ph.D.
Biometrics

WARREN E. SCHALLER, H.S.D.
Allied Health Sciences

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025, 713 661-1444

CORPUS CHRISTI ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology

2530 Morgan, Corpus Christi, Texas, 882-3487

STUART ALAN MASON, M.D., P.A.
Fellow American Association for Clinical Immunology and Allergy
Fellow of the American College of Allergists

Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

ALLERGY AND IMMUNOLOGY
Joseph T. Sams, M.D., P.A. or C. David Meadows, M.D., P.A.
Diplomates of the American Board of Allergy and Immunology

900 W. Randol Mill Rd., Suite 215, Arlington, Texas 76012, 817 277-1161

CHARLES A. RUSH, JR., M.D.
Diplomate/American Board of Allergy & Immunology

Northeast Medical Clinic Association
7601 Glenview Drive
Fort Worth, Texas 76118

V. E. FRIEDEWALD, M.D., F.A.C.P.
Diplomate American Board of Allergy and Immunology

Allergy

2203 West Tennessee, Midland, Texas 79701, 682-5385

FREDERICK W. GROVER, M.D. & ASSOCIATES
Diplomate of the American Board of Allergy and Immunology

Allergy and Immunology

Children and Adults
6114 Sherry Lane, Preston Center, Dallas, Texas 75225
Telephone: (214) 363-7790

TMA Members' Retirement Trust (Keogh)
. . . Another service of your association

Anesthesiology

HOUSTON PAIN CLINIC
ALEX M. STRAJA, M.D., F.R.C.P.(C), F.A.C.A.
Practice Limited to Treatment of Chronic Pain Syndromes and Nerve Blocks
Practice by Referral Only
Medical Towers, 6608 Fannin, Suite 1417
Houston, Texas 77030, Phone: 713 797-1681

Colon & Rectal Surgery

ALVIN BALDWIN, JR., M.D.
Diplomate American Board of Colon and Rectal Surgery

R. D. DIGNAN, M.D.
Diplomate American Board of Surgery
Diplomate American Board of Colon and Rectal Surgery
Suite 1209 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246
Telephone 824-2573

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery
2715 Fannin Street, Houston, Texas

C.D.L. CROMAR, M.D., M.S., F.R.C.S.E., F.R.C.S.C.
Surgery of the Rectum and Colon
Suite 8, 3337 Plainview, Pasadena, Texas 77504

SOMMAI SEHAPAYAK, M.D.
Diplomate American Board of Colon and Rectal Surgery
Diseases and Surgery of the Colon and Rectum and Fiber-optic Colonoscopy
Medical Tower, Suite 210, 1550 West Rosedale,
Fort Worth, Texas 76104, 817-338-4501 (24 hours)

SUVID PITA, M.D.
Colon and Rectal Surgery
Colonoscopy
Barnett Tower, Baylor Medical Plaza
3600 Gaston Ave, Suite 411
Dallas, Texas 75246
Telephone 214 821-4300

MANUEL G. LAGON, M.D., F.A.C.S.
Diplomate American Board of Colon and Rectal Surgery
FORT WORTH COLON AND RECTAL CLINIC, P.A.
Colonoscopy, Colon and Rectal Surgery
909 Eighth Avenue, Fort Worth, Texas 76104; Telephone 332-1371

MEMORIAL LIBRARY
TEXAS MEDICAL ASSOCIATION
1801 North Lamar Blvd., Austin, Texas 78701, 512 477-6704
A clinical library designed to assist the practicing physician
. . . Another service of your association

Dermatology

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy
1400 Eighth Street, Wichita Falls, Texas

DRS. PIPKIN AND RESSMANN
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies
714 Medical Arts Bldg., San Antonio, Texas 78205

J. GILMORE BRAU, M.D.
Dermatology and Syphilology
X-Ray and Radium Therapy
Hours 9 to 1—3 to 5
3817 Brown Street, Dallas, Texas

JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
A Professional Association
Dermatology, Syphilology, and Cancer of the Skin
3801 19th St., Suite 500, Lubbock, Texas 79410

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies
7777 Forest Lane, Suite 214, Dallas, Texas 75230; Phone 661-7460

GERALD A. CASID, M.D., P.A.
Skin Diseases—Skin Tumors
Hair Transplantation, Dermabrasion, Chemical Peels
333 N. Shiloh Rd., Garland, Texas 75042
Phone 214 272-5451

DAVID S. ALKEK, M.D. AND ASSOCIATES
Dermatology and Cancer of the Skin
Dermabrasion and Chemical Peel
8226 Douglas Avenue, Suite 755
Dallas, Texas 75225
Ph: 214 691-6691

Endocrinology

ENDOCRINE ASSOCIATES OF DALLAS, P.A.
STANLEY FELD, M.D.
RICHARD SACHSON, M.D.
Practice Limited to Endocrinology
Douglas Plaza Bldg., Telephone: 363-5535
8226 Douglas Avenue, Dallas, Texas 75225

TMA Physicians' Placement Service
. . . Another service of your association

Family & General Practice

GLENN C. COATES, M.D.*
GENE V. HAVERLAH, M.D.
SAM A. NIXON, M.D.*
EUGENE M. TOKAR, D.D.S.
1303 Hospital Blvd., Floresville, Texas 78114, 512 393-2527
*Diplomate American Board of Family Practice

SAMUEL SILVA, M.D.
Hair Transplantation
4759 South Freeway, Fort Worth, Texas, 817 923-7374

Gastroenterology

CECIL O. PATTERSON, M.D., F.A.C.P.
DAVID E. LANGDON, M.D., F.A.C.P.
Gastroenterology, Gastroscopy, Esophagoscopy, and Colonoscopy
1414 Medical Arts Building, Dallas, Texas, 742-6141-44
MILFORD O. ROUSE, M.D., F.A.C.P.
Consultations in hospitals only

DRS. BAILEY, DOUGLAS AND DEVANEY ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
George T. DeVaney, M.D.
Nisar Ahmed, M.D.

KALMAN NARAYAN, M.D.
Diplomate American Board of Internal Medicine
Gastroenterology, Gastroscopy, Colonoscopy, Polypectomy, E.R.C.P.
909 8th Ave., Suite 7, Ft. Worth, Texas 76104, 817 336-9055

General Surgery

BURT B. SMITH, M.D., F.A.C.S.
Surgery
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery
728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery
1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Thoracic Surgery
Vascular, General and Thoracic Surgery
Baylor Medical Plaza, 3600 Gaston Avenue,
Dallas, Texas 75246, 821-2356

TMA Physicians Benevolent Fund
. . . Another service of your association

ROBERT J. TURNER, III, M.D., F.A.C.S.
Diplomate American Board of Surgery
General and Peripheral Vascular Surgery
The Saint Joseph Professional Building
1400 South Main Street, Suite 104
Fort Worth, Texas 76104, 335-8311

ROBERT M. STECKLER, M.D.
Diplomate American Board of Surgery
Head and Neck Surgery, Surgery, and Surgical Oncology
Baylor Medical Plaza, Suite 1008, 3600 Gaston Avenue,
Dallas, Texas 75246, 214 827-9880

ROBERT DAVIS, M.D., M.B., B.Ch. (Rand), F.R.C.S. (Edin.)
General Surgery
430 Park Plaza Professional Building, 1213 Hermann Drive,
Houston, Texas 77004; 713 528-0597
By Appointment

Hand Surgery

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopaedic Surgery
PETER R. CARTER, M.D.
Hand Surgery and Upper Extremity Reconstructive Surgery
Baylor Medical Plaza, Barnett Tower, Suite 802, 3600 Gaston Avenue
Dallas, Texas 75246, 214 823-5351

Neurological Surgery

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery
Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Morris Sanders, M.D.
Phillip E. Williams, Jr., M.D.
Ira C. Denton, Jr., M.D.
W. Robert Hudgins, M.D.
Jack Woolf, M.D., Consultant
5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620,
Dallas, Texas 75235; 214 637-0420
8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905,
Dallas, Texas 75231; 214 369-7596
3600 Gaston Avenue, Barnett Tower, Baylor Medical Plaza, Suite 310,
Dallas, Texas 75246; 214 826-1976

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
Neurological Surgery
8210 Walnut Hill Lane, Suite 805, Dallas, Texas 75231, 363-8524

RONALD SMITH, M.D.
Neurological Surgery
901 South Lake, Fort Worth, Texas, 336-0551

CHERRY-LONG NEUROSURGERY ASSOCIATION
GLENN R. CHERRY, M.D., D.A.B.N.S., F.A.C.S.
R. GORDON LONG, M.D., D.A.B.N.S., F.A.C.S.
BENNIE B. SCOTT, M.D.
Neurological Surgery
Baylor Medical Plaza — 605 Barnett Tower
3600 Gaston Avenue — Dallas, Texas 75246
Telephone 214 826-7060

EL PASO NEUROLOGICAL INSTITUTE
Professional Association

Neurology, Neurosurgery, Electroencephalography Neuro-Radiology, Physiotherapy

William J. Nelson, M.D., Neurosurgery
John T. O'Neal, M.D., Neurosurgery
Robert D. Schneider, M.D., Neurology and Electroencephalography
Steven K. Crouse, M.D., Neurology and Electroencephalography

Medical Plaza Bldg., Suite 307
El Paso Medical Center
1501 Arizona Avenue, El Paso, Texas 79902
Telephone 915 532-8901

TEXAS NEUROLOGICAL INSTITUTE AT DALLAS, P.A.

Neurological Surgery
James E. Bland, M.D.
Martin L. Lazar, M.D.

Medical Neurology, Electroencephalography and Electromyography
Ralph G. Greenlee, Jr., M.D.
Allan L. Naarden, M.D.
Richard R. North, M.D.
William S. Woodfin, M.D.

Neuro-Ophthalmology and Electrodiagnosis of the Eye
Peter R. Bringewald, M.D.

7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676
8210 Walnut Hill Lane, Suite 900, Dallas, Texas 75231; 214 361-8100

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D., F.A.C.S.
E. FLOYD ROBINSON, M.D.

Neurological Surgery

2210 Maroneal, Houston, Texas 77025, 523-3684

FORT WORTH NEUROSURGICAL CLINIC
William R. Bernell, M.D.
George B. Crisp, Jr., M.D.
Charles L. Webster, Jr., M.D.

662 South Henderson, Fort Worth, Texas 76104
Telephone 338-9333; WATS Line 1-800-792-2278

Nuclear Medicine

NUCLEAR MEDICINE LABORATORIES OF TEXAS
Texas Medical Center
6411 South Main Street, Houston, Texas 77025

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology and Obstetrics-Gynecology

Herbert C. Allen, Jr., M.D., Director, 526-1501

HERBERT C. ALLEN, JR., M.D.
Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77025, 526-1501

Ophthalmology

HOUSTON EYE ASSOCIATES
1100 Hermann Prof. Bldg., Houston, Texas 77030, 713 790-1100

Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D., F.A.C.S.
Malcolm L. Mazow, M.D., F.A.C.S.
Robert H. Stewart, M.D., F.A.C.S.
Robert B. Wilkins, M.D., F.A.C.S.
Jeffrey D. Lanier, M.D., F.A.C.S.
Michael A. Bloome, M.D., F.A.C.S.
Paul C. Salmonsen, M.D.
Richard L. Kimbrough, M.D.

DRS. ALPAR, TAYLOR, HOWELL, CURRIE & WEINBERGER
Ophthalmology

John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Hugh B. Currie, M.D.
Bruce L. Weinberger, M.D.
Diplomates of the American Board of Ophthalmology
15 Medical Drive, Amarillo, Texas

TEXAS RETINA ASSOCIATES
Albert Vaiser, M.D.
William B. Snyder, M.D.
William L. Hutton, M.D.

Diseases and Surgery of the Retina and Vitreous

318 Medical Arts Building, Dallas, Texas, 748-0958

BRUCE C. TAYLOR, M.D.
RICHARD L. WINSLOW, M.D.
Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E., Dallas, Texas 75204
214 521-1153

McPHERSON ASSOCIATES
Diseases and Surgery of the Retina and Vitreous
Alice R. McPherson, M.D.
Robert A. Moura, M.D.
Arthur W. Willis, M.D.
Durham Barnes, M.D.

6436 Fannin, Suite 800, Houston, Texas 77030
713 797-1903

EYE ASSOCIATES
Diseases and Surgery of the Eye
Charles A. Sargent, M.D.
Alan C. Baum, M.D.

3838 Hillcroft, #415, Houston, Texas 77027, 713 781-2882

CORPUS CHRISTI EYE ASSOCIATES
J. Gordon Bryson, M.D.
C. A. Struve, M.D.
John W. Lewis, M.D.

3166 Reid Drive, Corpus Christi, Texas 78404, Phone 853-7319

EYE CENTER OF AUSTIN
3913 Medical Parkway
Austin, Texas 78756; 512 451-8484

Edward J. Petrus, M.D.
Richard E. Nieman, M.D.

JOHN Y. HARPER, JR., M.D., P.A.
Diseases & Surgery of the Vitreous and Retina

601 Madison Square Medical Building
311 Camden Street, San Antonio, Texas 78212
512 226-1812

TMA News Hotline — Call 1-800-252-9231
. . . Another service of your association

TMA Automobile Lease Program
. . . Another service of your association

PETER R. BRINGEWALD, M.D.

Neuro-Ophthalmology

Texas Neurological Institute at Dallas, P.A.
7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

By appointment only.

Orthopedic Surgery

H. H. Beckering, M.D.
L. Ray Lawson, M.D.
George Truett James, M.D.
Robert D. Vandermeer, M.D.
Wynne M. Snoots, M.D.
R. Stephen Curtis, M.D.

W. B. CARRELL MEMORIAL CLINIC

A Professional Association
2828 Lemmon Ave., Dallas, Texas

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas

Louis J. Levy, M.D.
Henry C. McDonald, Jr., M.D.
Fred W. Sanders, M.D.
James M. Beckley, M.D.
Joseph H. Gaines, M.D.

Ralph E. Donnell, M.D.
F. Carlton Hodges, M.D.
J. Price Brock, Jr., M.D.

ORTHOPEDIC ASSOCIATES

Diplomates American Board of Orthopedic Surgery

1133 N. 19th St., Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC

Joseph Barnhart, M.D.
Donald T. Lazarz, M.D.
Lee C. Detenbeck, M.D.
Thomas S. Padgett, M.D.

5620 Greenbriar, Houston, Texas 77005, 526-6262 and
Parkway Towers Professional Building, 150 West Parker Road,
Houston, Texas 77022, 691-3905

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr., M.D.
Kenneth C. Scholz, D.D.S., M.D.
W. Ted Sisco, M.D., P.A.
G. S. Gill, M.D.

3702 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

THE ORTHOPEDIC GROUP OF RICHARDSON

Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.

812 S. Central Expressway, Richardson, Texas 75080, 231-6396

Orthopedic Surgery

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr., M.D.
E. E. Rising, Jr., M.D.*
C. Poindexter, M.D.
C. R. Vavrin, M.D.
Diplomates American Board of Orthopaedic Surgery
*Emphasizing Surgery of the Hand
Frank R. Vincenti, M.D.

801 West Randol Mill Road, Arlington, Texas 76012, 817 261-8284

LOUIS W. BRECK, M.D., P.A., F.A.C.S.

Diplomate American Board of Orthopaedic Surgery

Practice Limited to Orthopaedic Surgery

1209 North Kansas, El Paso 79902
Telephone 915 544-3831

ADDRESS CHANGE? Avoid missing or delayed mail. Send old and new address to Membership Department, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701.

THURSTON DEAN, M.D.

Diplomate American Board of Orthopedic Surgery

509 N. Garfield Street
Midland, Texas 79701
Telephone: 915 682-0433 or 682-0163

Otolaryngology

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.

Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

Otology

DANIEL McNAMARA MARTINEZ, M.D., F.A.C.S.

Otology and Otoneurology

8210 Walnut Hill Lane, Presbyterian Professional Building,
Suite 400, Dallas, Texas 75231; 214 691-7331

DALLAS HEARING, BALANCE AND OCULAR PULSE LABORATORY

Audiology—Vestibulometry—Non-invasive Carotid and Vertebral Circulation Studies

402 Presbyterian Professional Building, 8210 Walnut Hill Lane,
Dallas, Texas 75231; 214 691-7367

Pathology

FORT WORTH MEDICAL LABORATORIES

John J. Andujar, M.D.
Dorothy Patras, M.D.

1400 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

BROWN & ASSOCIATES MEDICAL LABORATORIES

Clinical Pathology, Hematology, Surgical Pathology, Exfoliative Cytology and Electrophoresis

Wilson G. Brown, M.D.
George V. Miller, M.D.
Walter G. Olin, Jr., M.D.
John R. Thomas, M.D.
S. Joseph Skinner, M.D.
Joe B. Haden, M.D.
Enrique van Santen, M.D.
Elaine V. Shalek, M.D.
Robert H. McNeely, M.D.
Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas 77030
220 Park Plaza Prof. Bldg., Houston, Texas 77004
Telephone 527-5230
Mailing Containers on Request—Office Pickup Service in Houston

PRUITT MEDICAL LABORATORIES

Jack Pruitt, M.D.
E. Hernandez, M.D.
Diplomates, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology,
Medicolegal Consultation
P. O. Box 160, Lufkin, Texas 75901, 634-4451

TMA International Travel Program

. . . Another service of your association

WACO CLINICAL PATHOLOGY LABORATORY
K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Robert Wayne Walter, M.D., F.A.C.P.
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation
Mailing Containers on Request
2112 Washington Ave., P.O. Box 3160, Waco, Texas 76707, 756-7226

J. S. Wilkenfeld, M.D., Medical Laboratories, Inc.
J. S. WILKENFELD, M.D. ENA E. MOCEGA, M.D.
Diplomates of the American Board of Pathology
Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology
8850 Long Point Road, P.O. Box 55008
Houston, Texas 77055, 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

ARTHUR L. RAINES, M.D. AND ASSOCIATES
Pathologists
DIPLOMATES, AMERICAN BOARD OF PATHOLOGY
Clinical Pathology
Exfoliative Cytology
Surgical Pathology
Medicolegal Consultation
Hospital and Clinic Laboratory Consultation
P. O. Box 118, Cleburne, Texas 76031
817 645-9181, Ext. 360
MAILING CONTAINERS ON REQUEST

HENRY B. OWENS, M.D., F.C.A.P.
Diplomate American Board of Pathology
Cytology and Tissue Pathology Only
801 E. Border St., Suite M, P. O. Box 1627
Arlington, Texas 76010, 817 461-2771
Mailing Containers on Request—Office Pickup Service in Arlington

Physical Medicine & Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES WARM SPRINGS FOUNDATION, INC.
P. O. BOX 58, GONZALES, TEXAS 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade
DAVID E. GUMPER, Administrator
LARRY E. BROWNE, M.D., Medical Director

ROBERTO G. ROLFINI, M.D.
Diplomate American Board of Physical Medicine & Rehabilitation
Rehabilitation Medicine and Electromyography
702 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205, Telephone 226-2424

WILLIAM T. BLESSUM, M.D.
Physical Medicine, Rehabilitation, & Electromyography
7342 Oak Manor, Suite 125
San Antonio, Texas 78229; Telephone 512 349-6573

SHOAL CREEK REHABILITATION CENTER
3501 Mills Avenue, Austin, Texas 78703, 512 452-0361
Rodney J. Simonsen, M.D., Medical Director
Joe T. Powell, M.D., Associate Director
Comprehensive rehabilitation facilities for spinal cord injury, stroke, head injury, pain management, and related conditions

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D., F.A.C.S.
THOMAS M. BIGGS, M.D., F.A.C.S.
LAURENCE E. WOLF, M.D.
Diplomates American Board of Plastic Surgery

PLASTIC SURGERY
5419 Caroline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery
530 Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Cosmetic Surgery
612 Doctors Bldg., Fort Worth, Texas 336-0356

PLASTIC SURGERY ASSOCIATES
Simon Fredricks, M.D., F.A.C.S.
Charles W. Bailey, Jr., M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery
Jonathan J. Dora, M.D.
1103 Medical Towers, Houston, Texas 77025, 523-5575

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
Plastic & Reconstructive Surgery
Cosmetic Surgery
606 Medical Plaza Bldg., 800 Eighth Avenue, Fort Worth, Texas 76104, 335-4751

VALENTIN GRACIA, M.D., P.A., F.A.C.S., F.I.C.S., D.A.B.
Aesthetic Surgery—Burns
1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

FRANCIS A. MORRIS, JR., M.D.
Diplomate American Board of Plastic Surgery
Plastic Surgery
3100 Red River, Austin, Texas 78705; 512 476-9149

PATRICK H. BECKHAM, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery
1111 West 34th Street, Suite 207, Austin, Texas 78705, 459-3258

WILLIAM E. BARNES, M.D.
Diplomate American Board of Plastic Surgery
Cosmetic Surgery
Plastic & Reconstructive Surgery
1301 West 38th Street, Suite 608, Austin, Texas, 454-7659

JOHN E. CARTER, M.D., P.A.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Telephone: (Area Code 512) Office 696-2390 Medical Exchange 227-6331

JOSEPH C. FORD, M.D., P.A., F.A.C.S.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery
508 Madison Square Medical Building
311 Camden, San Antonio, Texas 78215, 224-5509

BROMLEY S. FREEMAN, M.D., F.A.C.S.
D. ROBERT WIEMER, M.D.
Diplomates American Board of Plastic Surgery
Plastic & Reconstructive Surgery

7000 Fannin, Suite 1770, Houston, Texas 77025
713 795-5584

JACK L. CONLEE, M.D.
Diplomate American Board of Plastic Surgery
Plastic and Cosmetic Surgery

3318 S. Alameda, Suite 1, Corpus Christi, Texas, 855-7359

PLASTIC SURGERY ASSOCIATION
LEONARD KOCH, M.D.
Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410, 806 792-2313

ROBERT L. CLEMENT, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive Surgery

1111 West 34th Street, Suite 205, Austin, Texas 78705, 512 459-3101

STEPHEN C. LESAUVAGE, M.D.
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1318 Clinic Drive, Tyler, Texas 75701; 214 593-8296

Psychiatry

Perry C. Talkington, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Larry R. Kimsey, M.D.
Charles M. Smith, M.D.
Gregory G. Dimijian, M.D.
Linda R. Hughes, M.D.
Roy H. Fanoni, M.D.
Byron Howard, M.D.
Larrie W. Arnold, M.D.
Madeline W. Harford, M.D.
John G. Looney, M.D.

Practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

ALAN B. BRINSMADE, M.D.
General Psychiatry
Specializing in Psychotic Illnesses-Acute and Chronic

Hermann Medical Center Professional Building
Houston, Texas 77025, 713 524-8496

Texas Continuing Education Directory
. . . Another service of your association

FABRE CLINIC

LOUIS F. FABRE, JR., M.D., Ph.D.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy
Children — Family — Alcoholism

Free of charge to patient MEDICATION CLINIC
FOR PATIENTS WITH ANXIETY OR DEPRESSION
IN CONJUNCTION WITH CNS RESEARCH WITH
PSYCHOPHARMACOLOGICAL COMPOUNDS

DAVID McLENDON, Ph.D.
Licensed Clinical Psychologist
Individual and Group Psychotherapy
Diagnostic Evaluations and Counseling

H. JOHN JACKSON, Ed.D.
Educational Psychologist
Administrative Consultation to School District
Program Organization Consultation
Individual Family Counseling

5503 Crawford Street, Houston, Texas 77004, 713 526-2328

PERRY C. TALKINGTON, M.D.
Psychiatry

4645 Samuell Blvd., Dallas, Texas 75228, 214 381-3849

CHARLES B. COVERT, M.D., P.A.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy

San Felipe Green Professional Building, Suite 314
1900 Yorktown, Houston, Texas 77056; 713 627-9988

HARRIS HAUSER, M.D. AND ASSOCIATES
Psychiatry

Frank H. Chesky, M.D.
Jose A. Gutierrez, M.D.
Harris M. Hauser, M.D.
Linda S. Blume, A.C.S.W.

7777 Southwest Freeway, Suite 1004, Houston, Texas 77074;
713 772-4600
1740 West 27th, Suite 315, Houston, Texas 77008; 713 772-4600

TMA 1977 Annual Session
May 12-15 Houston

Psychiatry & Neurology

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., J. J. Leyva, M.D.

Department of Psychology
Allen Goss, Ph.D., Jim M. Phillips, Ph.D.

Practice Limited to Neurology and Psychiatry
Office Hours By Appointment

First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

STEPHEN WEISZ, M.D.
Practice Limited to Neurology and Psychiatry

1637 Medical Arts Bldg., Dallas, Texas 747-5183

HAUSER CLINIC
Psychiatry, Neurology, Electroencephalography and Electromyography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
*H. James Stuart, M.D.
Javier A. Zapata, M.D.
*Susan B. Darsey, M.D.
*Harvey A. Rosenstock, M.D.

Section of Psychology
Ken R. Vincent, Ed.D.

Administrator
Richard J. Kurzenberger

Section of Neurology
*Gerald Ratinov, M.D.
*Robert M. Gordon, M.D.
*Ronald DeVere, M.D.

Section of Social Work
Pamela Plimmer, A.C.S.W.
Marguerite Papademitriou, A.C.S.W.
Margery Engel, M.S.S.W.
Jean Lerner, M.S.W.

808 Memorial Professional Building, Houston, Texas 77002
Telephone 713 224-5041

*Diplomate, American Board of Psychiatry and Neurology

THE FORT WORTH NEUROPSYCHIATRIC CENTER
*Herbert G. Rush, M.D.
A. Arauzo, M.D.
Sanford Lehrer, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

*Diplomate American Board of Psychiatry and Neurology

H. KORNBLIT, M.D.
Neurology—Headache Clinic

Memorial City Prof. Bldg. #176
902 Frostwood, Houston, Texas 77024

MEMORIAL NEUROLOGICAL ASSOCIATION
Neurology, Electroencephalography, Electromyography and C. T. Scan
James L. Frey, M.D.
Harris M. Hauser, M.D., F.A.A.N.
Cheor J. Kim, M.D.
Lorenzo Lorente, M.D.
1740 West 27th, Suite 315, Houston, Texas 77008, 713 861-4516
7777 Southwest Fwy., Suite 1004, Houston, Texas 77074, 713 772-4600

Radiology

ROYAL WERTZ, M.D., F.A.C.R.
Practice Limited to Radiology

800 Rusk Street, Amarillo, Texas 79106, 373-8324

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D., D.A.B.R.

RADIOLOGY
109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

KARL THORD DOCKRAY, M.D.
Diplomate, American Board of Nuclear Medicine
Diplomate, American Board of Radiology

Roentgenology, Nuclear Medicine, Xeromammography
Mobile Film Service for Area Nursing Homes

763-5774 Office 765-7701 Page 762-0471 Mobile
Lubbock, Texas

Rheumatology

DON E. CHEATUM, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204, 823-4151

ROY M. FLEISCHMANN, M.D.
Diplomate American Board of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

3707 Gaston Avenue, Suite 810, Dallas, Texas 75246; 827-0868

Thoracic Surgery

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.
Maruf A. Razzuk, M.D.

DRS. PAULSON, URSCHEL, RAZZUK AND ASSOCIATES
Thoracic and Cardiovascular Surgery
1201 Barnett Tower
3600 Gaston Avenue, Dallas, Texas 75246; 824-2503

JOHN L. KEE, JR., M.D.
Thoracic Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246; 826-5184

ALLAN L. GRAHAM, M.D., F.A.C.S.
KARAMAT U. CHOUDHRY, M.D., F.A.C.S.
Diplomates American Board of Surgery and Board of Thoracic Surgery

ROBERT W. MILEY, M.D.
Diplomate American Board of Surgery

Cardiac, Thoracic and Vascular Surgery Associates
800 Eighth Ave., Suite 626, Fort Worth, Texas 76104: 332-7878

HECTOR O. YANES, M.D., P.A., F.A.C.S., F.A.C.C.
Cardiac, Vascular and Thoracic Surgery

Diplomate American Board of Surgery and
American Board of Thoracic Surgery

432 Medical Plaza, 800 Eighth Ave.,
Fort Worth, Texas 76104, 332-1947

RICHARD E. WOOD, M.D.
Cardiac, Thoracic and Vascular Surgery

Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890

Hours By Appointment

Urology

JO C. ALEXANDER, M.D., FOSTER FUQUA, M.D.,
ELGIN W. WARE, JR., M.D., GEORGE E. HURT, JR., M.D.,
DONALD E. JOHNSON, M.D. & ASSOCIATES
L. MICHAEL GOLDSTEIN, M.D., THOMAS P. REILLY, M.D.
Urology

3600 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC
Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109

Dolphus E. Compere, M.D., F.A.C.S.
Grant F. Begley, M.D., F.A.C.S.
Hugh Lamensdorf, M.D., F.A.C.S.

Diplomates of American Board of Urology

H. M. GIBSON, JR., M.D., F.A.C.S.
ABEL GARDUNO, M.D.
Certified by American Board of Urology
Practice Limited to Urology

512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephone 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
NEWTON F. McDONALD, M.D.
JAMES E. MORNEAU, M.D.
Practice Limited to Urology

1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

DONALD J. NEESE, M.D.
H. R. WAGNER, M.D.
Practice Limited to Urology

218 Hermann Professional Building
Houston, Texas 77025, Telephone: 713 521-9538
400 Medical Center Blvd., Suite 207
Webster, Texas 77598, Telephone: 713 332-2466

EUGENE R. TODD, M.D., P.A.
Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3434 Swiss Ave., Suite 406, Dallas, Tex. 75204, 214 826-3500

DALLAS UROLOGY ASSOCIATES
David D. Reisman, M.D.
Donald J. Logan, M.D.
Allen S. Plotkin, M.D.
Donald L. McKay, M.D.
Practice Limited to Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

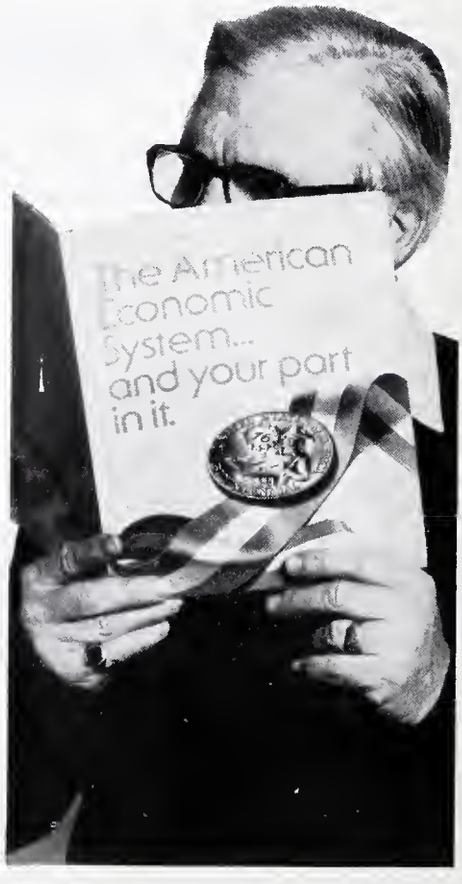
"Every man owes some of his time to the upbuilding of his profession"

—Theodore Roosevelt

Take an active role in TMA and your county society.

How much change does our American Economic System need: A lot? A little? None?

The more we all know about our system and how it works, the better we can decide what to preserve, what to change in the years ahead. That's why this special booklet has been prepared. Every American ought to know what it says. For a free copy, write: "Booklets," P.O. Box 1887, New York, N.Y. 10001.



A public service of The Advertising Council & U.S. Department of Commerce presented by this Magazine

Classified Advertising

Physicians Wanted

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from the big city problems. Call collect Dr. David M. Poguo at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6388.

PSYCHIATRIST, board certified or eligible needed for modern forensic psychiatry program. Texas license required. Salary $34,000+. Immediate openings. Call or write: Robert B. Sheldon, M.D., Superintendent, Rusk State Hospital, P. O. Box 318, Rusk, Texas 75785; 214-683-5481.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic; adjacent to 36 bed hospital, recently remodeled. Salary $40-48,000 per year. Partnership available after trial period. Contact Willis G. Youens, Jr., M.D., 105 N. Grohmann, Weimar, Texas 78962; 713-725-8545.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

EMERGENCY DEPARTMENT GROUP, HOUSTON AREA, EXPANDING—choice of salary or fee-for-service with guarantee—malpractice paid—Call 713-861-7942 or write Greater Houston Emergency Physicians Association, 625 West 19th, Houston, Texas 77008.

FAMILY PRACTICE—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas 512-672-2811.

FAMILY PRACTITIONER WANTED to join two established family practitioners in Trinity, Texas. Former partner is leaving November 1976 for residency. A large ready made practice is available now. You are invited to investigate clinic and hospital facility, compatibility, economic and environment of rural practice in an outstanding recreational area that includes 2,000,000 acres of East Texas forest, 90,000 acre Lake Livingston, various golf courses, marinas, and country club developments. All guarantees, etc. are negotiable. Bring your wife. Sam R. Barnes, M.D. and J. Richard Cook, M.D., P.O. Box 672, Trinity, Texas 75862.

FAMILY PRACTICE, GENERAL PRACTICE—Wanted immediately to join physician staff in rural community one-hour from Dallas-Fort Worth area. Extremely active practice with good benefits and an opportunity to enter into the corporation. Practice is with physicians clinic, 26-bed hospital, and 42-bed nursing home within the same building complex. Excellent arrangement for family practice. For further information contact Roger E. Marks, M.D., 817-897-2215 or 817-897-4436; Glen Rose, Texas.

PSYCHIATRIC RESIDENCY in approved three-year program. Effective connections with universities, medical schools, private clinics and community centers. Outstanding faculty and programs. Stipends with Texas license are $15,000, $16,000 and $17,000 per year. In addition, now offering residency in child psychiatry. For full information, write to Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

CHILD PSYCHIATRY RESIDENCY may be taken before or after adult psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psychopharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed in-patient unit for children. Liaison with graduate schools, medical school and community programs. Stipends: First year, $15,000; second year, $16,000; third year, $17,000; fourth year, $18,000. Contact Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

INTERNIST—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

PEDIATRICS—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

EMERGENCY MEDICINE GROUP PRACTICE in Texas. Salary $44,000 with many fringe benefits. Send resume to Houston E.P.A., 8700 Commerce Park Drive, Suite 121, Houston, Texas 77036.

WANTED: INTERNIST TO JOIN busy solo internist in new office. Complete clinical laboratory facilities plus x-ray. City of 25,000 population in Northeast Texas. Drawing area of 100,000. Two new hospitals. High caliber medical community. Excellent recreational facilities; good schools and churches. Ideal family city. Please reply to Ad-625, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EXCELLENT OPPORTUNITY FOR ONE OR TWO FPs. North Central Texas, small town, large lake. Large cities nearby. Exceptional recreation on doorstep. Clinic adjacent to new hospital. New schools, churches, homes. On-call time with three others. Solo or group. Salary guarantee. Growing area. Help needed badly. Please reply to Ad-663, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN WANTED: FAMILY CARE AND CHRONIC. Hospital facilities available ten miles. Clinic space available downtown Kemp. Pharmacy available. 45 miles southeast Dallas. Close to Cedar Creek Lake, fastest growing recreational-retirement area in Texas. Projected 100,000 population by 1980 in area. Country club, golf course, three miles. Excellent opportunity. Please reply to Edmund Horton, Ph., P.O. Box 449, Kemp, Texas 75143; phone 214-498-2011.

GENERAL PRACTITIONER WANTED—Growing hospital in progressive East Texas town near metroplex needs an ambitious general practitioner to join staff. Community and hospital very cooperative in helping to establish your practice. Call (214) 845-2281, or write to Milton Bolgiano or Paul Bennett, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75647.

WANTED: FAMILY PRACTITIONER TO JOIN three man group. East Central Texas. New joint commission approved 30 bed hospital. Airport. New junior-senior high complex. Railroad division point. Small industry. Primary income ranching. Three fishing lakes. Deer, quail, dove hunting. Country club. No initial investment necessary. Contact Drs. Gage, Cox or Halbert, 315 Main Street, Teague, Texas 75860, 817-739-2561.

PEDIATRICIAN WANTED: Three associated board certified pediatricians with 20 year practice. Position open July 1977 when one associate leaves to pursue different specialty. Office in Northeast Dallas, choice Dallas, Richardson, Highland Park schools. Large patient drawing area. Middle to high middle class income patients. 300 bed hospital two blocks away. Ad-677, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

TEXAS PRACTICES. Economic and professional climate excellent. Texas now reciprocates with all States except Florida. Have requests from physicians in communities for additional physicians, usually in the same field. City suburbs, small and medium size towns. Attractive financial guarantees. No fee to physician. Please write with C.V. and preferences to Sanford Smith, Professional Practice Management, Inc., 1102 Kingwood Drive, Humble, Texas 77339.

ORTHOPEDIC SURGEON NEEDED for 70 bed community hospital near Dallas. About 40 fractured hips admitted per year; other fractures can be estimated using this number as a guide. Medical staff of 15 members would refer all orthopedics. Reply to Ad-687, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL INTERNIST AND FAMILY PRACTITIONER NEEDED to join nine man group in Clifton, Texas. Located in the heart of Texas, 30 miles NW of Waco; 15 miles from Lake Whitney. Good fishing; excellent hunting; new modern golf course. Excellent schools and churches in a growing progressive community and directly associated with a 75 bed, Hill Burton hospital which is fully accredited by the joint commission. Terms open at first with partnership in future. Please contact V. D. Goodall, M.D., Clifton Medical & Surgical Clinic Association, Clifton, Texas 76634. Telephone 817-675-8621 or 675-3113.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $10.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

FP/GP WANTED: Morton (Cochran County), Texas. 55 miles west of Lubbock. Solo practice, fee-for-service, with other physicians in clinic. One GP in area. Office space available, fully furnished, Cochran Memorial Hospital and Clinic. Income dependent upon how hard willing to work. Open staff, 30-bed hospital. County seat, good churches, airport. Major income farming, ranching, oil fields. For further information contact: Truman Swinney, Cochran Memorial Hospital and Clinic, 201 East Grant, Morton, Texas 79346; 806-266-5565.

GENERAL PRACTITIONER WANTED: Due to retirement of one of staff because of ill health, urgently need qualified GP. No investments; no house calls; excellent schools, churches, recreational facilities, two fine junior colleges. Retiring doctor has been netting $50,000 per annum. All members of staff on the staff of local, fully accredited general hospital. Call or write Stripling Clinic, 555 So. Jackson, Jacksonville, Texas 75766. Phone 214-586-2278.

FAMILY PRACTITIONER: Psychiatric Clinic, seeking to expand medical services in the practice, has fully furnished facilities, including office & staff, for family physician. Choice location, close to four hospitals. Apply D. McCann, 2616 N. Oregon, El Paso, Texas 79902. 913-532-5232.

STUDENT HEALTH SERVICE—Beautiful campus, competitive salary and benefits. East Texas recreational area. New clinic in planning. Contact Capt. A. C. Harris USN (RET), Box 3058, Nacogdoches, Texas 75961. 713-569-4008.

PRIVATE PRACTICE OPPORTUNITY with guaranteed success now available in a modern 25-bed, JCAH-approved private hospital and a new four-doctor clinic; located in the heart of the Gulf Coast industrial center, 20 minutes from both downtown Houston, Texas and the Space Craft Center; clinic furnishes all overhead including rent, supplies and personnel; to insure success, a guarantee of $3000 per month for six months is offered; earnings limited only by personal desire as you maintain a private fee for service practice. For details, contact Floyd D. Pendergrass, Ph.D., Executive Director, Deaton Hospital, Inc., 208 North Main Street, Galena Park, Texas 77547. Phone or wire collect 713-672-6311.

PHYSICAL EXAMS AT PLASMA DONOR CENTER. Easy work. Five-day week. Part-time or full-time. Good pay and working conditions. Write: Lubbock Plasma Center, Inc., 1216 Avenue Q, Lubbock, Texas 79401; 806-763-5204 or 318-948-3044.

GENERAL PRACTITIONER-FAMILY PRACTICE, INDUSTRIAL, SURGERY, OBSTETRICS: Clinic, including lab and x-ray. Join internist and GP in busy practice. Salary and benefits negotiable. Contact Diamond Hill Clinic, 2223 NE 28th Street, Fort Worth, Texas 76106; 817-624-3193.

PUBLIC HEALTH DIRECTOR: The City of Austin, Texas, is accepting applications for the position of Director, Austin-Travis County Health Department. Full medical and administrative direction of local public health activities in a $4 million department of the City. Must be an MD with administrative experience; Texas license and MPH preferred. Salary starts at $35,000+, depending upon qualifications. Send resume to: Dan H. Davidson, City Manager, P.O. Box 1088, Austin, Texas 78767; 512-477-6511. Equal employment opportunity.

TWO PSYCHIATRISTS, board eligible, needed for expanding CCMHC. Primarily OPD work in adult, alcohol, drug programs, with limited travel to adjacent outreach offices. Salary $35,000-$42,000 negotiable. Liberal fringe benefits include malpractice insurance. Located in rapidly growing Central Texas lakes region, with easy access to metropolitan area. Contact Steven Schnee, Ph.D., Executive Director, Central Counties Center for MH/MR Services, Temple, Texas 76501; call 817-778-4811.

LOCUM TENENS WANTED—GENERAL INTERNIST desired for June and July 1977; hospital and office practice; salary can be arranged; possible permanent association. Contact S. Ortiz, M.D., 2601 Hospital Blvd., #103, Corpus Christi, Texas 78405 or call 512-884-3966.

ADMINISTRATIVE MEDICINE POSITION—prefer someone who has had at least 10 years experience in private practice and member of Texas Medical Association. Forty hours, five days a week. Central Texas. Primarily clinical medicine, but no practice. Please reply to Ad-700, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN WANTED TO JOIN three-man group; two GP's, general surgeon (all Board). Practice in Hearne, Texas, population 5,000; drawing area 12,000+. Contact Dr. Ken Kennamer, Hearne, Texas; 713-279-3451 or 713-279-3100.

OPENING NOW FOR RADIOLOGIST in 200-bed hospital and 15-man multispecialty group. Now have one radiologist. Large special procedure volume. Five week vacation. Guaranteed $60,000. On growing side of town with no competing hospitals. Write to: R. Bobbitt, M.D., Eastwood Clinic, P.O. Box 26338, El Paso, Texas 79926.

NEUROLOGIST-PSYCHIATRIST needed for 15-man multispecialty group with 200-bed hospital. Please call 915-592-0201, ext. 1680.

GP's NEED A GOOD GS. WANTED—Board eligible or qualified general surgeon to assist with three general practitioners who do not do surgery. About 20 elective cases each month, plus guarantee of $100,000 first year. US graduate only. Pasadena-Houston area. Call or write Frank J. Darby, Jr., M.D., P.A., 713-473-6289 (9-5) or 713-473-5668 (nite-weekend), 917 E. Curtis, Pasadena, Texas 77502.

Situations Wanted

UROLOGIST: 35 years old. Board eligible. Available July 1, 1977. Prefers solo practice but will consider group practice. Must be an area within short driving distance to Houston, Texas. Please write to Ramon L. Navarro, M.D., 551 Hallandale Drive, Akron, Ohio 44313 or call 216-666-3571 after 5 p.m. or 216-384-6111 during working hours.

YOUNG BOARD ELIGIBLE GENERAL SURGEON with family seeking a position in general surgery beginning July, 1977. Now completing one year fellowship in pediatric surgery. Two years experience as base surgeon in USAF hospital in Texas. Prefer group practice or partnership in small or medium size community near larger city. Texas licensed. Clifford A. Lakin, M.D., 24 Archdale Street, Charleston, South Carolina 29401.

CARDIOLOGIST—Board certified internal medicine, finishing 2nd year cardiology fellowship at a well known hospital in Dallas with extensive training in coronary angiography, seeks private practice for invasive or clinical cardiology in group or solo. Reply to Ad-690, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST, 32, wife pediatrician, both university trained. FLEX licensed in Illinois and board qualified. Desire suitable placement in Texas, available July 1977. Dr. Bala, 526 Maple Lane, Darien, Illinois 60559; telephone 312-963-2133.

POSITION WANTED: Clinical laboratory supervisor desires to return home to Texas. Extensive experience in clinical chemistry, clinical microbiology, and clinical laboratory administration in hospital and clinic laboratories. Position and salary negotiable. Please reply to Ad-692, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST 43, certified AP/CP seek association or directorship of hospital laboratory. Texas license. Available May 1977. Contact Jon B. Owens, Jr., M.D., 1037 Cheshire Lane, Houston, Texas 77018; telephone 713-686-5819.

UROLOGIST, age 35, will complete 4-year program June 1977. Board eligible, available July 1977. Seeking solo, association leading to partnership or group practice in Texas. Please reply to Ad-693, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SEEKING LOCATION: 31 year old, US trained general surgeon, will be board eligible July 1977. Experienced in endoscopy. Prefer medium to small community. Available July 1977. 504-455-7499, or write Ad-694, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PULMONARY INTERNIST—ABIM certified, board eligible in pulmonary medicine. FMG with FLEX, trained at university hospital in pulmonary intensive care, physiology, fiberoptic bronchoscopy, tuberculosis. Seeks suitable solo, partnership or hospital practice. Qualified to run respiratory therapy department and pulmonary functions laboratory. Available January 1977. Please reply to Ad-695, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

A BOARD CERTIFIED RADIOLOGIST licensed in Texas would like to do locums job in radiology for 1-3 weeks in April and May. Please reply (including your telephone number) in care of Ad-698, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

A RADIOLOGIST BOARD CERTIFIED IN DIAGNOSTIC RADIOLOGY and nuclear medicine seeks private practice opportunity either with a large radiology group or solo in a small hospital or large polyclinic (with opportunity to practice both nuclear medicine and diagnostic radiology). Please reply to Ad-696, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED EXPERIENCED GENERAL SURGEON, currently serving as a missionary in Latin America. Seek salaried position for 10 month period beginning August 1977. Please reply to Ad-697, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST-HEMATOLOGIST, board certified in both. 38, university trained. Has Texas license. ECFMG. Six years practice experience in a university setting. Seeks relocation to Texas. Please reply to Ad-699, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, 32, university trained in general and peripheral vascular surgery. Native of US. Would like to establish general surgery practice in Texas. All locations considered. Will complete military obligation in July 1978. Office phone: 913-684-3971. Home phone: 913-684-4766.

GENERAL PRACTICE: 26 year old South African immigrant seeks opportunity in general practice anywhere in Texas. Will write FLEX in June 1977 and available to start work July 1977. Contact Dr. M. H. Karjeker, 145 Sallie Street, Trenton, New Jersey 08610 or call 609-393-4736.

BOARD CERTIFIED, in late 30s, over 10 years experience with New York State Department of Mental Hygiene as a psychiatrist in various positions—clinical, teaching and administration. Seek solo or group multispecialty practice or salaried position in community mental health service or Texas State mental health department. Expect to get Texas medical license in June 1977. Available summer 1977. Please reply to P.O. Box 14, West Brentwood, New York 11717; 516-231-4235 (contact between 8 p.m.-10 p.m.).

For Sale or For Rent

AUSTIN—NEW PROFESSIONAL PARK. Internist, GP, FP, Peds, OB/GYN sought to associate in group setting for solo practice. Physician population has not kept pace with accelerated growth. University town, new hospital. Call or write: Cannon Professional Park c/o 3913 Medical Parkway, Austin, Texas 78756. Telephone 512-451-8489.

NEW ULTRA-MODERN, cedar and glass office space for lease in Northwest San Antonio, one block from loop 410 and one exit from IH 10. Across the road from Park North Hospital, the building is divided into six separate office spaces, four of which are occupied by 4 general dentists, one orthodontist, and three oral surgeons. Up to 4700 sq. ft. available at 60c sq. ft. with a very liberal allowance to finish out to your specifications. Ideal situation for the family practitioner or pediatrician. Contact Mossrock Venture, 2803 Mossrock, Suite 201, San Antonio, Texas 78230.

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

GROWING NORTHEAST SAN ANTONIO, 55,000 population. No MDs. Five examining rooms, reception, large personal office, carpeted, air conditioned. Rent free details contact W. H. Gibson, 512-656-1166, night 512-651-6449.

SAN ANTONIO, TEXAS: Spacious doctor's office available in near West side, five minute drive to Lutheran and Santa Rosa Hospitals. Excellent for Spanish speaking doctor. Very low overhead. For additional information call 512-226-5293 or write 1110 El Paso Street, San Antonio, Texas 78207.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

PHYSICIAN FINANCING BY MAIL. $5,000 to $50,000. All payments are 100% tax deductible. Can be used for any reason or purpose. For complete details in strict confidence write: Vern Britton, President, Financial Resources Co., Box 502-T, Richmond, Virginia 23204. Or call 804-262-5969.

TEXAS
GULF COAST
EMERGENCY PHYSICIANS

Career oriented primary care emergency physicians with additional post graduate training and/or emergency medicine experience. Continuing educational requirements mandatory. Teaching and non-teaching emergency departments available. The only emergency medicine group staffing emergency department-Texas Medical Center. Board eligibility or certification with interest in trauma qualifies for director status. Immediate openings. Guarantee $52,000-$58,000. Fringes: Malpractice, major medical, life, disability income. Houston metropolitan facilities. Excellent schools, churches with a friendly area population. Cultural and educational opportunities. Fresh and salt water. Astrodome, major league sports (football, baseball, ice hockey, golf tournaments, tennis tournaments). Only qualified need apply. Call or Send CV: Gulf Coast Emergency Physicians Association, 3325 Plainview, Suite 7, Pasadena, Texas 77504, 713-943-1918.

Thanks to you, I still have a home.

For over 30 years, Smokey has been asking you to be careful with fire.

During that time, you've helped cut the number of careless fires in half.

So from Smokey Bear and all of us who live in the forest, thanks for listening. And keep up the good work.

Ad Council A Public Service of This Magazine & The Advertising Council

Advertising Directory

Air Ambulance of America	144
Beltone Electronics	17
Beverly Hills Hospital	123
Bland-Curran Cadillac Co.	27
Burroughs Wellcome Co.	82
Chaparrosa Agri-Service	36
Comatic Laboratories	3rd Cover
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
Flint Laboratories	37-38
Gulf Coast Emergency Physicians	141
Insurance Corporation of America	32
Ives Laboratories	12
Mead Johnson Laboratories	65
Kelsey-Seybold Clinic	117
Eli Lilly and Company	46
Medical Arts Clinic of Corsicana	128
The Medical Protective Company	117
Parke Davis & Co.	21
Pasadena Bayshore Hospital	109
Pennwalt Corp.	18-19
The Pharmaceutical Manufacturers Association	60-61
The Prudential Insurance Company of America	9
Roche Laboratories	1-2, 45, 124-125
Roerig & Co.	63
Schick Hospital	127
Scott and White Clinic	Back Cover
Smith Kline & French	64
Starlite Village Hospital	36
Texas Bank and Trust Company	36
Texas Medical Association	
Annual Session	111-114
Automobile Leasing Program	39
Memorial Library Fund	120
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchins, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	128
Upjohn	20
University of Texas Press	25
Warner-Chilcott	4-5, 81
Wichita Falls Clinic	36
Physicians' Directory	129-138
Classified Advertising	139-141

Publication of an advertisement in *Texas Medicine* is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

Letters

Cardiac Life Support Training

Dear Ms Baker:

The American public is becoming well educated regarding basic cardiac life support, and many have taken courses to teach them cardiopulmonary resuscitation (CPR). Emergency medical technicians (EMTs) in many places are expert not only in basic cardiac life support but in advanced cardiac life support techniques as well. These techniques include intubation and ventilation, establishment of intravenous lines, arrhythmia recognition and management, and cardiac defibrillation. The public expects physicians to be equally adept in these areas. Unfortunately, such expectations appear to fall short in many instances. As JCAH requirements for hospital staff privileges tighten and as public opinion and professional responsibility dictate, this bids fair to become an area of serious concern, if in fact it has not already. In addition, the formal training given medical students in basic and advanced cardiac life support seems woefully inadequate. The Committee on Cardiovascular Diseases of the Texas Medical Association, cognizant of these shortcomings, has voted unanimously to encourage, support, and promote basic and advanced cardiac life support training among practicing physicians, and particularly among students in the medical schools of our state.

V. E. Schulze, Jr, MD, Lubbock, Member,
TMA Committee on Cardiovascular Diseases.

Optometrists Want Law To Allow Them To Prescribe Medications

Dear Ms Baker:

As an ophthalmologist, I am deeply concerned that the Texas Optometric Association is sponsoring a bill in the Legislature to authorize optometrists to use "pharmaceutical agents."

As a physician, I am equally concerned that any nonphysician would be allowed by law to undertake direct medical care. If optometrists can use political power to elevate their responsibilities in health care delivery, isn't it likely that other limited practitioners will soon do the same?

It is no longer an inside joke that such so-called specialists as "coldologists" may emerge in health care. If optometry is successful in passing this bill, the Legislature will have set a precedent for broadening the authority in the use of drugs to nurse practitioners and physician's assistants —in independent practice.

The Legislature must be made to understand that the "pharmaceutical agents" discussed so casually in HB 21 are like any other drugs; they have potentially dangerous side effects which only physicians are trained to handle.

Those optometrists supporting the bill contend that diagnostic drugs are necessary to improve detection of glaucoma. The fact is that an excellent instrument exists to detect glaucoma without drops. Since this technique is available to a trained optometrist, there is absolutely no need to expose the patient to the added risk of drugs administered by a nonphysician. Furthermore, pharmaceutical agents used in diagnosis are far more apt to create emergency situations than therapeutic drugs used over a period of time.

Texas ophthalmologists are stringently opposing HB 21, which is part of a nationwide campaign by optometrists. Nine states have passed similar bills in the past few years. Sixteen states are battlegrounds for drug bills in 1977. In Louisiana, physicians are attempting to repeal an optometric drug bill which was enacted two years ago.

Some Texas optometrists do not support this bill. Our own efforts to defeat the legislation, as a matter of fact, are not intended to disparage the practice of optometry. These practitioners are fully trained for refractive care, but they have neither the medical training nor the experience to deal with potentially dangerous side effects of the drugs they wish to administer.

The House of Delegates of the Texas Medical Association adopted a resolution last May committing TMA to "oppose legislation authorizing nonmedical practitioners, *of any description*, the use of prescription legend drugs for either diagnostic or therapeutic purposes, or both."

All physicians would do well to contact their senators and representatives to express strong opposition to HB 21. If the experience in other states is any indication, an all-out effort is essential to defeat the bill.

Charles E. Russo, MD, Houston, President,
Texas Ophthalmological Association.

Physicians for Small Communities

Dear Ms Baker:

There is little doubt that the greatest need for physicians in Texas is in the small communities. It is also generally conceded that the young physician most likely to practice in a small town is one who was raised in a small town, especially if his spouse had a similar background.

Ironically, the selection processes of the medical schools make it more difficult for the premed student from the small town to gain admittance to medical school. Although lip service is given to the selection of the well-rounded student who is active in extracurricular activities and has broad experience, the grade point average (GPA) and the Medical College Admission Test (MCAT) score remain the dominant factors in selection as

shown in the studies of Trevino, Fuentes, and Bruhn published in *Texas Medicine*, January 1977 (The Premedical Advisory Process: Attitudes of Premedical Advisors).

The premed student from the small high school does not have the advantage of enrichment courses offered in large high schools. He enters premed with a weaker academic background than his large-city classmates, and finds himself behind from the start in competing for grades. To find oneself in a college calculus class in which everyone else has already had calculus in high school is pretty tough. The same applies to other science courses in which small schools tend to be weak. The student from a small town often finds himself playing catch-up.

If we are ever to meet the medical needs of our small communities, we must give special consideration to the premed students from these areas who will more likely return to a primary care practice in a small community.

George R. Hugman, Jr, MD, Gladewater.

[Ed. Note: The TMA Council on Medical Education and Hospitals has appointed a task force on Access to Health Care which is studying the issues cited by Dr Hugman. An interim report will be made to the TMA House of Delegates in May.]

Wanted: Facts on Fire Ants/Mirex

Dear Ms Baker:

One of the puzzling dilemmas of our technological times is that frequently, when we approach a problem, we cannot be sure that the "cure" is not worse than the problem itself. The controversy surrounding the ravages of the fire ant through the southern states versus the possible hazards of the insecticide, Mirex, is just such a dilemma. Since Mirex is the most effective measure against the spreading fire ant, this kind of technological problem remains sharply in focus.

The Environmental Protection Agency recently decided to phase out Mirex by the end of 1977 unless some convincing statistics can show that there are more plus than minus factors in its use.

I am intrigued by the puzzle, and would like to survey my fellow physicians and health services personnel in the states affected by fire ants as to their findings regarding either or both horns of this particular dilemma. To this end, I would greatly appreciate answers to the following questions by all those in the know who have time and energy to spare to the problem:

1. How many individuals have been stung by fire ants in your area, region, or state? Can you estimate a probable number? State sex.

2. What kind of reactions to fire ant stings have you seen? Local reactions? How great was the swelling? Larger than an inch? Larger than 4 to 6 inches? Did swelling involve a joint? More than one joint?

Were there systemic reactions? What symptoms? Underline symptoms if present: Wheezing, hives, angioedema, urticaria, laryngeal edema.

How soon did symptoms occur?

How long did they last?

Was there a superimposed infection? Does this occur often? Are such infections severe?

3. Have patients reacting to fire ants required hospitalization? If so, how many, and for approximately how long?

4. To your knowledge, have there been any fatalities caused by fire ant stings in your area, region, or state? If so, how many? Could you provide details?

5. If you have any case histories of reactions to fire ant stings, they would be greatly appreciated. They should include age, sex, race, symptoms, treatment, and outcome.

6. Have you any knowledge as to the success or failure of hyposensitization to fire ant venom? If so, details would be appreciated.

7. To your knowledge, have there been any cases of Mirex poisoning and/or illnesses attributed to the use of Mirex in your area, region, or state? If so, could you provide information about such incidents? Case histories, if available, about such illnesses would be greatly appreciated. They should include age, sex, race, symptoms, treatment, and outcome.

8. Have you a personal opinion about this particular problem? Do you believe the possible hazards of fire ants outweigh the possible hazards of the use of Mirex, or vice versa?

Physicians' replies may act as a deterrent to the phasing out of Mirex, or they may corroborate the findings of the EPA.

Claude A. Frazier, MD, PA, Doctors Park, Bldg 4, Asheville, NC 28801.

Letters to the Editor are welcome for consideration in this column. The Board of Publication and the editors reserve the right to excerpt letters in accordance with available space and editorial judgment as recommended by consultants. Neither the editors nor TMA shall be, in any manner or to any extent, directly or indirectly, responsible for views expressed by authors in this column.

At last, an Air Ambulance Service that understands and cares.

In an emergency, the last thing you need to worry about is an ambulance service. Air Ambulance of America is readily adaptable to your needs. We are qualified professionals available to assist in these emergencies on a moment's notice. Medical advisors are on staff to communicate precisely with you, the physician. In addition, medical attendants, MD's and RN's are available.

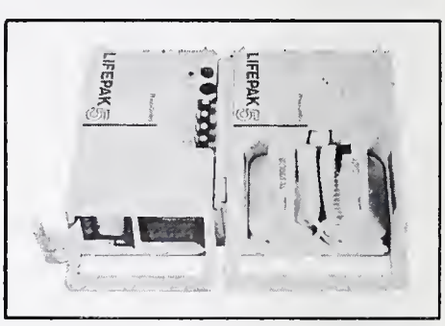
On-Board Monitoring and Features

Air Ambulance of America utilizes LIFEPAK 5, the most advanced electronic cardiac monitoring system available. It is a combination non-fade cardioscope/recorder and DC defibrillator. This light-weight system provides the ultimate in portability and versatility.

LIFEPAK 5 cardioscope/recorder and defibrillator act as one when joined, providing instant ECG information. However, each can operate independently because of separate removable Battery/Paks. While monitoring a patient's ECG through the patient cable, the unit is usually viewed. Although, a QRS beeper with adjustable volume level is provided for audible monitoring when the scope can not be watched.

Other features of LIFEPAK 5 include proper output for connection to a telephone modulator or radio telemetry transmitter allowing you to forward the latest data to the receiving hospital, sure-fire controls conveniently located right at the operators hands, Battery/Pacs that can be replaced in a matter of seconds, and more. LIFEPAK 5's small size enables it to be placed right on the patient's stretcher for continuous monitoring during transport.

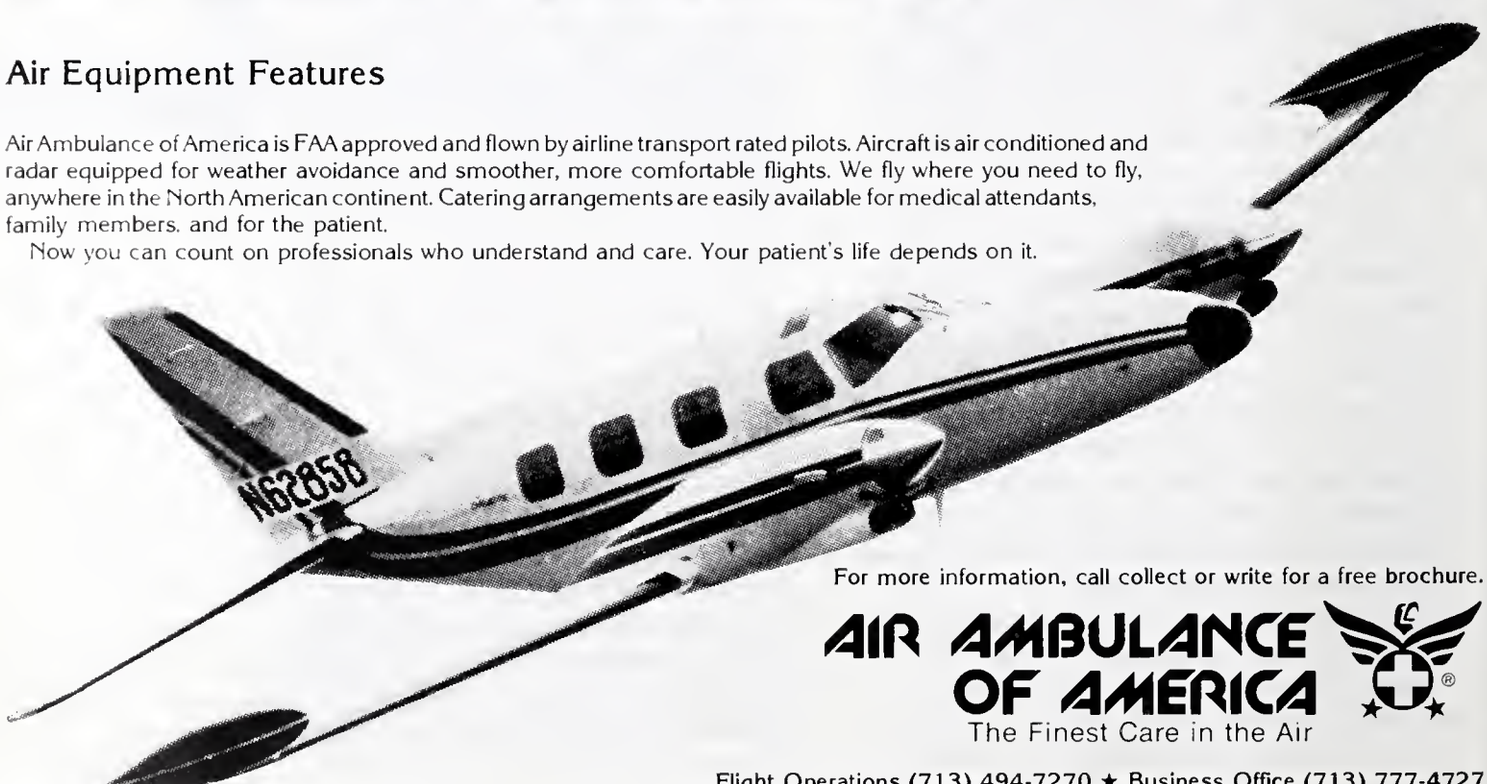
Also, Air Ambulance of America service features resuscitator, oxygen, large stretcher area with additional seats for medical attendants and family members, and expedient transportation for organ transplant tissues. Air Ambulance can also make arrangement for ground ambulance service.



Air Equipment Features

Air Ambulance of America is FAA approved and flown by airline transport rated pilots. Aircraft is air conditioned and radar equipped for weather avoidance and smoother, more comfortable flights. We fly where you need to fly, anywhere in the North American continent. Catering arrangements are easily available for medical attendants, family members, and for the patient.

Now you can count on professionals who understand and care. Your patient's life depends on it.



For more information, call collect or write for a free brochure.

AIR AMBULANCE OF AMERICA

The Finest Care in the Air

Flight Operations (713) 494-7270 ★ Business Office (713) 777-4727

Memorial Hospital Professional Building ★ 7777 Southwest Freeway, Suite 510 ★ Houston, Texas 77081

Editorials

WHAT'S HAPPENING IN AUSTIN? "TAKE TWO" TO CALL 1-800-252-9231

Since adopting the professional liability insurance crisis as the number one priority for 1977, TMA's leaders have been in the front lines in Austin—talking with individual legislators, providing information in support of medicine's stance, testifying before House and Senate Committees, and dealing with presentations by other groups whose interests differ from those of physicians.

Along with key physicians, TMA's attorneys are putting in a tremendous amount of time in medicine's behalf—arduous, tedious, and sometimes extremely uncomfortable hours have been required of them.

The crisis has to be resolved through legislation, and the most desirable legislative program is the one approved by the House of Delegates. Its key provisions include reasonable limitation on awards, statute of limitations, voluntary binding arbitration, presuit mandatory screening panels, notice of intent to file suit, elimination of ad damnum clause and oral warranty of cure, changes in collateral source rule, periodic payments and structured awards to the plaintiff, and strengthening the disciplinary and investigative authority of the Texas State Board of Medical Examiners.

Charged with the responsibility of resolving the problem through legislation is the TMA Council on Medical Legislation. The Council on Communication provides support in areas relating to public education, and the Committee on Professional Insurance is active in areas relating to professional insurance and the development of future programs and activities relating to professional liability insurance. Overall coordination of the program lies with the Special Ad Hoc Committee on Professional Liability, and legal counsels are present every step of the way in planning, presenting, testifying, negotiating, and advising.

A Senate hearing scheduled March 1 was postponed; in the House, the professional liability insurance bill is still "in working session." When you read this, in about a month, the picture will have changed, but be assured that TMA has people—officers, members, and staff—doing their darndest for you.

There are other health issues too: Should pharmacists be allowed to substitute generic drugs? Will chiropractors succeed in their efforts to have their services paid for by insurance? May a justice of the peace or a medical examiner permit the taking of corneal tissue for transplants under certain conditions? What will be the final decision on state funding for primary care and family practice residencies? What will happen to the bill relating to procedures in cases of sudden infant death syndrome?

For daily updates on what's happening in Austin, dial the Texas Medical Association's toll-free Legislative Hotline number: 1-800-252-9231. There's a new message every day and you can get it in about two minutes.

Take Two!

SOUTHEAST TEXAS POISON CENTER FILLS NEED FOR REGIONAL SERVICE

The University of Texas Medical School at Houston and Hermann Hospital have affiliated with The University of Texas Medical Branch Poison Center at Galveston to create a major regional center which will function at both institutions. The new Southeast Texas Poison Center has administrative offices at 8th and Mechanic, Galveston, Texas 77550, and telephone calls to 713/654-1701 are answered 24 hours a day.

We hope that the new center will alleviate some of the problems that have been associated with the proper diagnosis and treatment of poisoning.

It has become increasingly difficult for the practicing physician to supply accurate information about poisonings. This is a result of rapid proliferation of new chemicals and common household products. This situation has been further complicated by multiple trade names for the same products and by the combination of different toxic substances in the same vehicles.

This exact situation has been mimicked in the

production and formulation of new drugs. In addition, often little information is available about toxic reactions to, or acute overdosages of, therapeutic substances.

Isolated poison centers have been established to try to solve this problem, but they vary greatly in the quantity and the quality of services provided and are not subject to any review. Many centers have been unable to maintain adequate information sources and have relied on standard textbooks which are out of date soon after they are printed. Since most centers have been operating independently, there has been no accumulation or sharing of clinical experience between centers. Further, some inquiries require expert knowledge of a specialized nature which is not available to these individual facilities. In effect, this represents only a temporary and inadequate solution to the existing problem.

An analysis of the action required regarding calls received at the Boston Poison Center in Boston, Massachusetts, which was reported in 1970[1] revealed that in 36% of the inquiries the victim required no treatment, and in 29% only simple home management was needed. Thus, a major function of any poison center is the distribution of information to nonprofessionals rather than the treatment of poisonings. A similar analysis of the calls received at the present Galveston Poison Center in 1975 revealed the same distribution of inquiries with a majority not requiring hospital-based therapy. The individuals making these calls were usually nonmedical. National statistics indicate that only 10-20% of such contacts are generated by the medical profession while the Galveston data placed this proportion at 40%.

Providing required services and maintaining accurate information is most readily accomplished by establishing a regional poison center with satellite information and treatment centers. This system permits one facility to serve a large population and geographic area, providing the most current information and access to experts in specific fields. In return, such a center can accumulate data from all its satellites and offer a more extensive evaluation of clinical experience in relation to individual poisons. Further, the regional center maintains and provides information about toxic substances indigenous to its service area.

Regional centers also serve as tertiary care facilities for those few poisonings that require intensive care, maintain an active toxicology laboratory, provide quality control over the distribution of information by their satellite centers; and are active in public education and poison prevention.

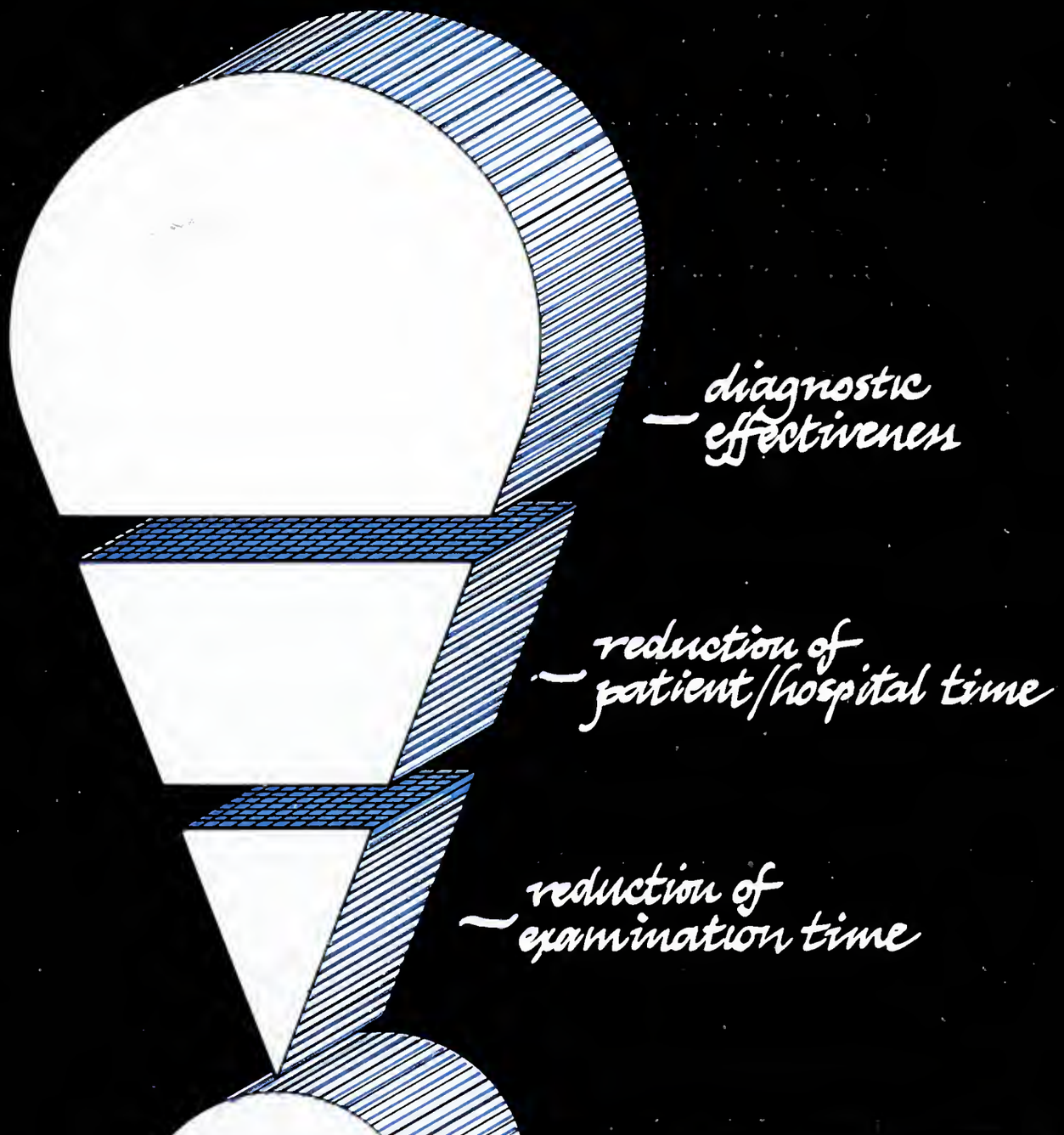
One regional system with a national distribution is The National Poison Center Network. This association originates from the Pittsburgh Poison Center with Dr Richard Moriarty as its chairman. The network has assumed all of the responsibilities required of a national program. Individual members are constantly provided with current information about the recognition and management of poisonings gathered from the combined clinical experiences of all members. Experts in specific areas of toxicology are available through the network, and public education is fostered by an extensive publicity program utilizing the "Mr. Yuk" symbol.

The expanded regional center at The University of Texas Medical Branch, The University of Texas Medical School at Houston and Hermann Hospital is part of The National Poison Center Network, and maintains several member hospital facilities in Houston. The Center will provide a tertiary care facility and diagnostic laboratory center for both Houston and Galveston. The geographical area directly serviced by this center includes Southeastern Texas bounded by Nacogdoches, Bryan, College Station, Columbus and Victoria. Individuals from any location can contact the center and will be advised as to the appropriate first aid and, if necessary, will be referred to their private physician or an emergency room. No charge is assessed for these informational calls. Should the circumstances warrant, the patient may be directed to a member hospital or directly to the tertiary care center. The individual's private physician will be kept informed of the developments in each case. We hope that this regional network will serve as a model for the development of a network throughout the state.

Frank A. Simon, MD, Houston; and
Michael D. Ellis, MS, Galveston.

May 77 Texas Medicine

Who should make decisions about C-T scanners? Cancer chemotherapy
Reye's syndrome DPW/Medicaid task force recommendations
Otologic/audiologic help for patients Exogenous particles in blood
Liver tumors in women taking contraceptive pills



LIBRARY
U.C. SAN FRANCISCO
MAY 18 1977

THE LIBRARY
ACQUISITIONS DIV.
UNIV. OF CALIFORNIA, S. F.
SAN FRANCISCO CA 94143

##

Torbett-Hutchings-Smith Memorial Hospital
and Torbett-Hutchings-Smith Clinic

322 Coleman Street — Marlin, Texas 76661 — Telephone: 883-3561

Post Office Box 60

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.
Cecil A. McRee, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

VASCULAR SURGERY
Cecil A. McRee, M.D., F.A.C.S.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

TRAUMATIC AND ORTHOPEDIC SURGERY
D. R. Swetland, M.D., F.A.C.S.

ALLERGY
S. W. Hughes, M.D.

CARDIOLOGY
W. F. McKinley, Jr., M.D.

OBSTETRICS AND PEDIATRICS
William Pickvance, M.D.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
Ronald E. Henderson, Jr., M.D.
David M. McTaggart, M.D.
S. M. Bunn, Jr., M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

NEUROSURGERY
Harry H. Slade, M.D., F.A.C.S.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Associate Administrator:
Larry Parsons

Director-Coordinator, Nursing Service:
Vera Bee, R.N.

Director of Patient Care:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street — DALLAS, TEXAS 75211 — Telephone 823-4151

INTERNAL MEDICINE
John B. Allen, M.D., D.A.B.I.M.
Morris E. Magers, M.D., D.A.B.I.M.
Channing Woods, M.D.
Richard C. Stone, M.D., Gastroenterology
Landon W. Stewart, M.D., D.A.B.I.M.
Cloyce L. Stetson, Jr., M.D., D.A.B.I.M.
David S. Sowell, III, M.D., D.A.B.I.M., Cardiology
Don E. Cheatum, M.D., D.A.B.I.M., and D.A.B. Rhu, F.A.C.P.
W. Mark Armstrong, M.D., D.A.B.I.M.
Sam W. Waters, M.D.
George E. Thomas, M.D., D.A.B.I.M.
Steven P. Bowers, M.D., D.A.B.I.M.

ORTHOPEDIC SURGERY
George S. Phalen, M.D., D.A.B.O.S., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
John B. Miller, III, M.D.
Vernie D. Bodden, M.D.

PEDIATRICS
Halcuit Moore, M.D., D.A.B.P., F.A.A.P.
P. E. Luecke, Jr., M.D., D.A.B.P., F.A.A.P.
Larry Gray, M.D., D.A.B.P., F.A.A.P.

GENERAL SURGERY
George P. Fosmire, M.D., D.A.B.S., F.A.C.S.
Miller S. Bell, M.D., D.A.B.S., F.A.C.S.

UROLOGY
Harry M. Spence, M.D., D.A.B.U., F.A.C.S.
William H. Hoffman, M.D., D.A.B.U., F.A.C.S.
Richard B. Dulany, M.D., D.A.B.U., F.A.C.S.

RADIOLOGY
Raymond W. Burford, M.D., D.A.B.R.
Joe B. Caldwell, M.D., D.A.B.R.
James B. Evans, M.D., D.A.B.R.

DERMATOLOGY
William N. New, M.D., F.A.A.D., F.A.C.P.

OTOLARYNGOLOGY AND OTOLOGIC SURGERY
D. W. Shuster, M.D., D.A.B.O.

OPHTHALMOLOGY
R. M. Burnside, M.D., D.A.B.O.
James M. Copps, M.D., D.A.B.O.

DENTISTRY AND DENTAL SURGERY
J. Boyd Hollabaugh, D.D.S.
William F. Walton, D.D.S.
George D. Blake, D.D.S.
Larry L. Cowsert, D.D.S.

ADMINISTRATION
C. H. Rosamond, Administrator
Jack Green, Associate Administrator

DIRECTOR OF NURSING SERVICE
Miss Billye J. Norris, R.N.

INACTIVE STATUS
George M. Underwood, M.D., D.A.B.I.M., F.A.C.P., Gastroenterology
William H. Potts, M.D., F.A.C.P., Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics and Gynecology
Adam D. Green, M.D., Surgery
B. Celia Slaughter, M.D., D.A.B.P., F.A.A.P.
John B. Bourland, M.D., D.A.B.O.G.

ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register,* 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older:

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see following page.

Her next attack of cystitis may require

the Bactrim™ 3-system counterattack

ROCHE

Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introital colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flora.

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.

Texas Medicine
VOL 73 MAY 1977

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION
Don G. Harrel, MD, Dallas
Chairman
Sam N. Key, MD, Austin
Vice-Chairman
Walter A. Brooks, MD, Quanah
Secretary
R. Harvey Bell, MD, Palestine
C. W. Yates, MD, Rosenberg
Paul R. Meyer, MD, Port Arthur

TMA OFFICERS
L. S. Thompson, MD, Dallas
President
Sheridan S. Evans, MD, McAllen
Vice-President
John M. Smith, Jr., MD, San Antonio
President-Elect
James G. Morris, MD, Lubbock
Secretary
Ben R. Keller, Jr., MD, Arlington
Treasurer
C. Lincoln Williston, Austin
Executive Director

EDITORIAL STAFF
1905 N Lamar Blvd, Austin 78705
Telephone: 512-477-6704
Marilyn Baker, Managing Editor
Rae Vajgert, Assistant Managing Editor
Elise David, Assistant Editor
Donna Billie, Editorial Assistant
Patty Mullins, Secretary

ADVERTISING STAFF
1801 N Lamar Blvd, Austin 78701
Jon R. Hornaday, Advertising Director
Anne Sheinutt, Advertising Manager

SCIENTIFIC PUBLICATION COMMITTEE
Joseph M. Abell, Jr., MD, Austin
Chairman
Robert Askew, MD, Austin
Vice-Chairman
Ernest C. Butler, MD, Austin
Jesse D. Cone, MD, Odessa
C. W. Daeschner, MD, Galveston
George A. Gates, MD, San Antonio
Tracy R. Gordy, MD, Austin
R. Maurice Hood, MD, Austin
Paxton H. Howard, Jr., MD, Temple
Joseph Lancaster, MD, Austin
Francis E. McIntyre, MD, Austin
Paul C. Peters, MD, Dallas
Richard S. Ruiz, MD, Houston
H. Irving Schweppe, Jr., MD, Houston
Theodore P. Votteler, MD, Dallas

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS
1801 N Lamar Blvd, Austin 78701
c/o Ray Riggs, Business Manager
$4 per year for members; $8 for non-members; $14 for foreign; $6 for libraries, hospitals, and universities; $4 for medical students. Single copy: $1.25.

CHANGE OF ADDRESS
1801 N Lamar Blvd, Austin 78701
c/o Edward R. Bierschenk, Membership Director

Copyright 1977 by the Texas Medical Association. Owned and issued monthly by the Association.

Second Class Postage paid at Fort Worth, Texas, under act of March 3, 1879.

Contents

Scientific Articles

57 Cancer chemotherapeutic agents — Charles E. Oswalt, MD; A. B. Cruz, Jr., MD

68 Rationale and usefulness of heparinization: an overview — Robert L. Palmer, MD

75 Benign liver tumors in patients taking oral contraceptives — William H. Turney, MD; Ross F. Shipp, MD; N. J. Bellegie, MD

86 Necrotic venules ensheathing exogenous particles as harvested from transfusion filters — Gus Schreiber, MD

98 Toxemia of pregnancy — Raymond B. Wait, MD; Clark M. Hinkley, MD; Angel Werch, MD

104 An otologic-audiologic approach to aural rehabilitation — Ernest C. Butler, MD; Paul Burns, MD; John R. McFarlane, MD; Scott Haug, MA; William A. Rudolph, MA

106 Malignant external otitis — Vincent G. Caruso, MD; Ceri M. Griffiths, MD; Byron J. Bailey, MD

Features

123 New TMA president ready for aggressive year in socioeconomic and legislative areas

127 Physicians and the mass media

Editorials

152 The C-T scanner: who decides? — James E. Harrell, MD

153 Expanded roles for medical schools — Edward N. Brandt, Jr., MD, PhD

News

7 State panel urges Medicaid changes

8 Gov Briscoe signs bill creating more family practice residencies

8 TMA Annual Session Activities include open hearing with AMA delegates

10 TMA resident physicians' and medical students business sections will meet

11 SSA conducts physician extender experiment

11 Gov Dolph Briscoe signs bills to increase available corneal tissue

14 TMA creates new committee on computerized axial tomography

24 AMA approves Dolly Vinsant Memorial Hospital for continuing medical education

Departments

31 Capital Comments

35 Meetings

46 Continuing Education

114 Information for Authors

115 Medicine and the Law

128 Medical Newsmakers

129 Medicine and Literature

132 Deaths

150 Letters

On The Cover

The computerized axial tomographic scanners provide excellent diagnostic information in relatively little time and with no danger to the patient. The equipment, however, is expensive, and there is considerable discussion about where the equipment should be utilized and what criteria should be met before a purchase is made. The editorial on page 152 offers one viewpoint, and the matter will be discussed in depth by an ad hoc committee of the Texas Medical Association (see page 14).

All oral bronchodilators are pretty much the same. Right? Wrong!

The difference is in their action—both before and after symptoms begin. That's the reason for TEDRAL®.

- □ effective and prolonged bronchodilation from the synergistic effect of ephedrine and theophylline
- □ β-ADRENERGIC ACTION RELAXES BRONCHIAL SMOOTH MUSCLE
- □ α-ADRENERGIC ACTION REDUCES BRONCHIAL EDEMA AND SECRETIONS
- □ dosage forms to meet individual patient needs

For proven performance...

Tedral® / Tedral® SA / Tedral® Elixir

Each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer), 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer), and 25 mg phenobarbital in the immediate release layer.

SUSTAINED ACTION

Each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine HCl, and 2 mg phenobarbital, the alcohol content is 15%.

See next page for brief summary.

WARNER/CHILCOTT
Division, Warner-Lambert Company
Morris Plains, New Jersey 07950

T-GP-72-B/W

TEDRAL®

TEDRAL® SA Sustained Action

TEDRAL® Elixir

CAUTION: Federal law prohibits dispensing Tedral SA without prescription.

Description. Tedral: each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Tedral SA: each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer); 25 mg phenobarbital in the immediate release layer.

Tedral Elixir: each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine hydrochloride, and 2 mg phenobarbital; the alcohol content is 15%.

Indications. Tedral, Tedral SA, and Tedral Elixir are indicated for the symptomatic relief of bronchial asthma, asthmatic bronchitis, and other bronchospastic disorders. They may also be used prophylactically to abort or minimize asthmatic attacks and are of value in managing occasional, seasonal or perennial asthma.

Tedral SA (Sustained Action) offers the convenience of b.i.d. dosage.

Tedral Elixir is convenient for persons who may have difficulty in swallowing tablets.

These Tedral formulations are adjunets in the total management of the asthmatic patient. Acute or severe asthmatic attacks may necessitate supplemental therapy with other drugs by inhalation or other parenteral routes.

Contraindications. Sensitivity to any of the ingredients; porphyria.

Warnings. Drowsiness may occur. PHENOBARBITAL MAY BE HABIT-FORMING.

Precautions. Use with caution in the presence of cardiovascular disease, severe hypertension, hyperthyroidism, prostatic hypertrophy, or glaucoma.

Adverse Reactions. Mild epigastric distress, palpitation, tremulousness, insomnia, difficulty of micturition, and CNS stimulation have been reported.

Average Dosage. *Prophylactic or Therapeutic.*

Tedral: *Adults*—One or two tablets every 4 hours. *Children*—(Over 60 lb) one-half the adult dose.

Tedral SA: *Adults*—One tablet on arising and one tablet 12 hours later. Tablets should not be chewed. *Children*—Not established for children under 12.

Tedral Elixir: Note: One teaspoonful is equivalent to *one-quarter* Tedral tablet. *Children*—One teaspoonful per 30 lb body weight, every 4-6 hours, unless prescribed otherwise by physician. Should be given to children under 2 years of age only with extreme caution. *Adults*—One to two tablespoonfuls every four hours.

Supplied. Tedral: White, uncoated scored tablets in bottles of 24 (N 0047-0230-24), 100 (N 0047-0230-51) and 1000 (N 0047-0230-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0230-11).

Tedral SA: Double-layered, uncoated, coral/mottled white tablets in bottles of 100 (N 0047-0231-51) and 1000 (N 0047-0231-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0231-11).

Tedral Elixir: Dark red and cherry-flavored in 474 ml (16 fl oz) bottles (N 0047-0242-16).

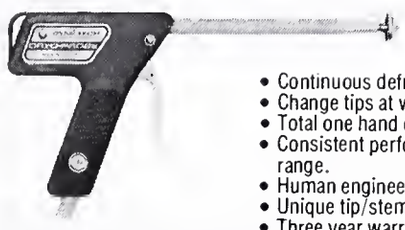
STORE BETWEEN 59° and 86°F (15° and 30°C).

Full information is available on request.

#1 in a series

"INSTRUMENTS AS GREAT AS THE STATE OF TEXAS"

CRYOSURGICAL PROBE



- Continuous defrost as desired.
- Change tips at will without closing gas valves.
- Total one hand operation.
- Consistent performance over large pressure range.
- Human engineered for comfort and less fatigue.
- Unique tip/stem seal — no blown 'O' rings.
- Three year warranty.

GYNÉ-TECH INSTRUMENT CORP.

For information and demonstration send your R_x form or call

(303) 674-7383

31804 S. Ponderosa Way; Evergreen, Colo. 80439

See our great instruments at Booth 103 Texas Medical Association meeting — Houston

Wichita Falls Clinic

501 Midwestern Parkway East, Wichita Falls, Texas 76302

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Clark W. Brazil, M.D.

GENERAL THORACIC AND VASCULAR SURGERY
Cecil H. Meares, M.D.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
David G. Borman, M.D., F.A.C.S.
Richard H. Moore, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOLOGY AND RADIOACTIVE ISOTOPES
Thomas K. Bose, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
Joseph Bilder, Jr., M.D.
George W. Slaughter, M.D.

INTERNAL MEDICINE
P. K. Smith, M.D., F.A.C.P.
I. L. Humphrey, Jr., M.D.
Preston McCall, M.D.
Julian C. Sleeper, M.D., Cardiology
David M. Pogue, M.D., Cardiology
Wendell I. Wyatt, M.D.
Lowell L. Harvey, M.D.

FAMILY PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
James T. Cook, M.D.
Madeleine Kent, M.D.

UROLOGY
John C. Wurster, M.D.

OBSTETRICS AND GYNECOLOGY
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
James M. Missler, Administrator

REGISTER NOW FOR THE AMA'S INTRODUCTORY SEMINAR ON NEGOTIATIONS

June 4-6, 1977
San Antonio

Negotiation—a necessary art in today's changing health care environment. Negotiating is a skill that can be learned. One of the AMA's highly acclaimed Seminars on Negotiations will be held in San Antonio. For information and registration forms, write AMA Dept of Negotiations, 535 N Dearborn, Chicago 60610.

News in brief

Medicaid

The Task Force for Evaluation of Medicaid in Texas has proposed more than 80 recommendations that would produce a savings of $169 million during the next 60 months, and would expand health services to an additional 1.3 million people . . . 7

Family practice residencies

Texas Gov Dolph Briscoe has signed a bill which creates more Texas family practice residencies. The bill gives the Coordinating Board power to contract with medical schools, licensed hospitals, and non-profit corporations to provide state funds for family practice residency training programs . . . 8

Annual Session

Physicians attending the TMA Annual Session May 11-15 in Houston will have a chance to discuss thoughts, opinions, and criticism with the TMA delegates to the AMA. During the Houston meeting, physicians will be able to earn up to 32 hours of Category 1 credit toward the TMA Physician's Recognition Award by participating in continuing medical education activities . . . 8

Texas medical schools

More than $20,000 in unrestricted grants has been distributed by the American Medical Association Education and Research Foundation to the Texas medical schools. Funds are donated by the physicians, the Woman's Auxiliary, and medical families . . . 13

Continuing education

The American Medical Association has approved two-year accreditation of Dolly Vinsant Memorial Hospital, San Benito, Tex, for continuing medical education. Accreditation means the 59-bed hospital can offer continuing medical education programs for Category 1 credit included in the AMA Physician's Recognition Award . . . 24

News in detail

State panel urges Medicaid changes

The Task Force for Evaluation of Medicaid in Texas offered plans in April to produce a savings of $169 million in the next five-year period while expanding medical services for the Texas Medicaid program.

The 47-member citizens task force completed a 76-page proposal for combating increasing medical costs.

W. Marvin Watson, Daingerfield, head of the task force, said the group concluded two months of hearings across the state and produced 4,500 pages of testimony before making the recommendations.

Watson said the group recommended the Medicaid eligibility system be changed to provide services for the working poor in Texas who are excluded from the program because they are working.

The addition of the working poor to Medicaid rolls will decrease costs to the taxpayer if legislation is approved to support other changes in the program, such as including city, county, and hospital district funds which bring matching federal money, Watson said.

"Government health programs must be delivered on an equal basis not penalizing the marginally poor who dare to work," Watson said.

The state welfare board accepted the task force report and instructed department staff to recommend which of the 80 recommendations could be implemented immediately.

The group proposed more than 80 recommendations that would produce a savings of $169,000,000 during the next 60 months, and would expand health services to an additional 1.3 million people.

"Limited payment rates and oppressive regulation create a separate and unequal health system serving only certain categories of people set up by mandate in Medicaid and discriminating against those who need health care and cannot afford it, for by regulation they are not categorically eligible," Watson said.

"Medicaid encourages people to quit their jobs so that they can get health care benefits. They quit work and let the government filter them and their families into welfare and Medicaid program," he said.

Discussing the role of the physicians, Watson said, "Medicaid also alienates the professional provider of health care, especially in rural areas and in the poverty pockets of urban areas. These skilled people usually ask only a reasonable fee. Yet, Medicaid subtracts a discount from even the lowest of professional fees, and in the process discourages the professional medical provider from taking part in the program.

"If the state authorities establish a medically-needy program, many of the abuses and objectionable features of the present Medicaid program will vanish," Watson said.

"Medicaid is dependent upon physicians yet only about half of them in Texas actively treat Medicaid recipients. The task force is recommending ways to make the program more attractive to them, yet the physicians themselves must realize their obligation and assume their necessary role in Medicaid," Watson said.

Physicians who served on the task force include Mario Ramirez, MD, G. V. Brindley, Jr, MD, Max Cole, MD, Clotilde Garcia, MD, and William C. Levin, MD.

Full participation by the states practicing physicians will put more patients into the physician's offices, rather than encourage the growth of outpatient clinics where ill recipients gather to wait to see a doctor they may never see again, the task force concluded.

The convenience of consultation in the doctor's office slows the growth of more costly outpatient clinics and eases transportation programs to treatment sites, the task force said.

The task force has recommended a pilot program for a three year period which will reimburse rural and inner city physicians at their regular fee for the purpose of determining the impact on availability of service to clients where they reside, and reducing cost of transportation and hospital services now associated with low physician participation.

Gov Briscoe signs bill creating more family practice residencies

Gov Dolph Briscoe has signed HB 282 which creates more Texas family practice residencies.

HB 282, sponsored by Rep Lyndon Olson Jr, Waco, and Sen Pete Snelson, Midland, gives the Coordinating Board, Texas College and University System the power to contract with medical schools, licensed hospitals, and non-profit corporations to provide state funds for family practice residency training programs.

The bill was supported by the Texas Medical Association and the Texas Academy of Family Physicians.

William F. Ross, MD, chairman of the TMA Council on Medical Education and Hospitals, had testified at legislative hearings in support of the legislation.

However, Dr Ross said that not only family practice residencies but primary care residencies must be expanded in Texas.

"We now face a shortage of primary care physicians in Texas," Dr Ross said. "The shortage of primary care physicians, especially family physicians and general internists, will become worse since the number of residency programs is not adequate to meet the deficit and to replace those physicians who will leave practice due to age and other factors."

HEW releases incorrect list of Medicare payments

In the name of the "sunshine law," the Department of Health, Education, and Welfare released the names of physicians, groups, and laboratories in March that made more than $100,000 in Medicare business in 1975.

The Texas Medical Association contacted Texas physicians on the list of solo practitioners and found errors in the HEW information. The list included physicians who were incorrectly listed as solo practitioners and had incorrect amounts attributed to them.

The AMA, spot checking the list in 30 states and the District of Columbia found an error rate of 66.5% in the HEW release. The AMA checked 173 of the 409 physicians listed as solo practitioners.

Of these, 86 were incorrectly listed as solo practitioners, seven had incorrect amounts attributed to them, and 22 said both the solo designation and the amount were wrong. Only 58 of the 173 considered the information correct.

HEW will issue a new and corrected list of Medicare providers whose billing totaled more than $100,000. HEW officials said that the original release was not checked out carefully enough.

The release of the names of 409 physicians, 1,752 groups, and 58 laboratories marked the first public release in the Medicare program. The Medicaid program has issued over $100,000 lists for several years.

The AMA had protested the release of the list even before the error rate was known, charging that the publication of names serves only to badger a large segment of the profession and to establish guilt by innuendo.

TMA Annual Session activities include open hearing with AMA delegates

Physicians attending the TMA Annual Session May 11-15 in Houston will have a chance to discuss thoughts, opinions, and criticisms with the TMA delegates to the AMA.

The open hearing will be at 4:15 pm Thursday, May 12, in the Camellia Room of the Shamrock Hilton Hotel.

"The AMA remains the largest and most influential medical organization in the country. Its influence on the legislative and bureaucratic process is significant. Every member of the TMA should support it and make his or her views known to the AMA delegates," said Max Cole, MD, chairman of the TMA delegates to the AMA.

During the Houston meeting physicians will be able to earn up to 32 hours of category 1 credit toward the American Medical Association's Physicians Recognition Award by participating in the continuing medical education activities.

Sessions of the House of Delegates and TMA boards, councils, and committees also are on the Annual Session agenda.

The House will convene at 8 am Thursday, May 12, in the Chaparral Room. The House will meet Friday, May 13, and Saturday, May 14.

TMA members wishing to express views on issues facing the House may speak to reference committees meeting at 10 am Thursday at the Marriott.

TEXAS MEDICAL ASSOCIATION

INSURANCE PROGRAM

- DISABILITY INCOME
- OFFICE OVERHEAD
- MAJOR MEDICAL
- PERSONAL ACCIDENT
- LIFE INSURANCE

administered by

TEXAS MEDICAL ASSOCIATION INSURANCE TRUST

1901 N. Lamar Blvd., Austin, TX 78705, (512) 476-6551

Prudential
Group Insurance

Rep Paul G. Rogers (D-Fla) will headline the Saturday general meeting luncheon at the Shamrock Hilton Hotel. Rogers is serving his eleventh term in Congress and his sixth year as chairman of the House Public Health and Environment Subcommittee.

Richard E. Palmer, MD, president of the American Medical Association, will address the House of Delegates Luncheon at 1 pm Thursday, May 12, at the Marriott.

Texas Gov Dolph Briscoe will address the General Meeting Luncheon at 12:15 pm Friday, May 13, at the Shamrock.

The corporate body of the Texas Medical Foundation will meet at 7:45 am Saturday, May 14, at the Marriott.

TMA resident physicians' and medical students business sections will meet

The first meetings of the TMA Resident Physicians' Business Section and the TMA Medical Student Business Section will be in Houston in May.

Both groups were established by the TMA House of Delegates to provide medical students and housestaff officers in Texas training programs a more direct role in the policy deliberations of TMA.

The Resident Physicians' Business Section will meet from 9 am through 5 pm Saturday, May 7, at the Host International Hotel in Houston.

Keynote speaker for the luncheon will be former US Congressman Ron Paul, MD, Lake Jackson, Tex.

The Medical Student Business Section will meet from 1 pm through 3:30 pm Saturday, May 14, in Salon B of the Marriott Hotel in Houston.

Keynote speaker will be Ace Pickens, JD, a member of the TMA Legal Counsel.

Further information about the Medical Student and Resident Physicians' Business Sections can be obtained from the Membership Department, Texas Medical Association, 1801 N Lamar Blvd, Austin, 78701.

HEW secretary announces advisory panel on national health insurance

A 29-member committee to "give advice on major issues" involved in national health insurance has been announced by HEW Secretary Joseph Califano.

Califano called the group a "broadly representative group from all parts of the country . . . (who) will bring many different perspectives to bear . . . including the problems of large urban centers and smaller rural areas, innovative HMOs and more traditional forms of medical practice."

Public hearings will be scheduled in several major cities beginning in the summer, and the committee's recommendations must be ready by early in 1978.

Chairman of the committee is HEW Under Secretary Hale Champion. Christopher Fordham, MD, will serve as vice chairman.

Henry Aaron, assistant secretary for planning and evaluation and Robert Derzon, the new administrator of the Health Care Financing Administration, will serve on the committee.

Physician committee members include Daniel Asimus, MD, president, Physicians National Housestaff Association; Edward Beddingfield, MD, American Medical Association Legislative Committee; Hillman Castle, MD, family practitioner, University of Utah; Paul Cornely, MD, Washington DC; David Hamburg, MD, president, Institute of Medicine; Richard Hammond, MD, family practitioner, Austell, Ga; William Roy, MD, director, medical education, St Francis Hospital, Topeka; Charles Sanders, MD, administrator, Massachusetts General Hospital, Boston; Ernest Saward, MD, professor, social medicine, Rochester University, New York; Aaron Shuley, MD, director, Jackson Hinds Comprehensive Health Center, Jackson, Miss; and Mayor Harvey Sloan, MD, Louisville.

Also serving on the committee is Manuel Solis, director, Rio Grande Federation of Health Centers, San Antonio.

SSA conducts physician extender experiment

The Social Security Administration (SSA) is conducting a National Physician Extender Reimbursement Program which permits payments during a two-year period to physician practices for the independent services of physicians' assistants, nurse practitioners, Medex, and similar non-physician health care providers.

However, the SSA stresses that the program is an experiment and does not change existing Medicare reimbursement policy.

Unless practices are participating in the experiment, the services of physician extenders are not reimbursable under the medical insurance part of Medicare (Part B) unless they are rendered under the direct personal supervision of the physician, SSA said.

The SSA is conducting the experimental program under the authority of the 1972 amendments to the Social Security Act.

Physicians participating in the experiment must accept full legal and ethical responsibility for the services delivered by the physician extender, and the physician extender's services must be legally authorized by the state or substate area in which the services are delivered.

Austin physicians will participate in cancer research program

Nine Austin physicians will participate in an international cancer research program with Holy Cross Hospital in Austin and the Southwest Oncology Group.

The Southwest Oncology Group tests new drugs and advanced therapies for cancer, operating under sponsorship of the National Cancer Institute.

Under the three-year pilot project, the Austin physicians will furnish the Southwest Oncology Group with data gathered while treating selected cancer patients.

Holy Cross Hospital will work closely with The University of Texas Medical Branch at Galveston.

The Austin doctors include Demetrius Loukas, MD; Jack Whitaker, MD; Robert Kerr, MD; Dennis Welch, MD; Douglas Terry, MD; Dudley Youman, MD; William DeGinder, MD; George Brown, MD; and Larry Hill, MD.

Gov Dolph Briscoe signs bills to increase available corneal tissue

Gov Dolph Briscoe has signed two bills to increase the supply of corneal tissue available for transplants to save vision.

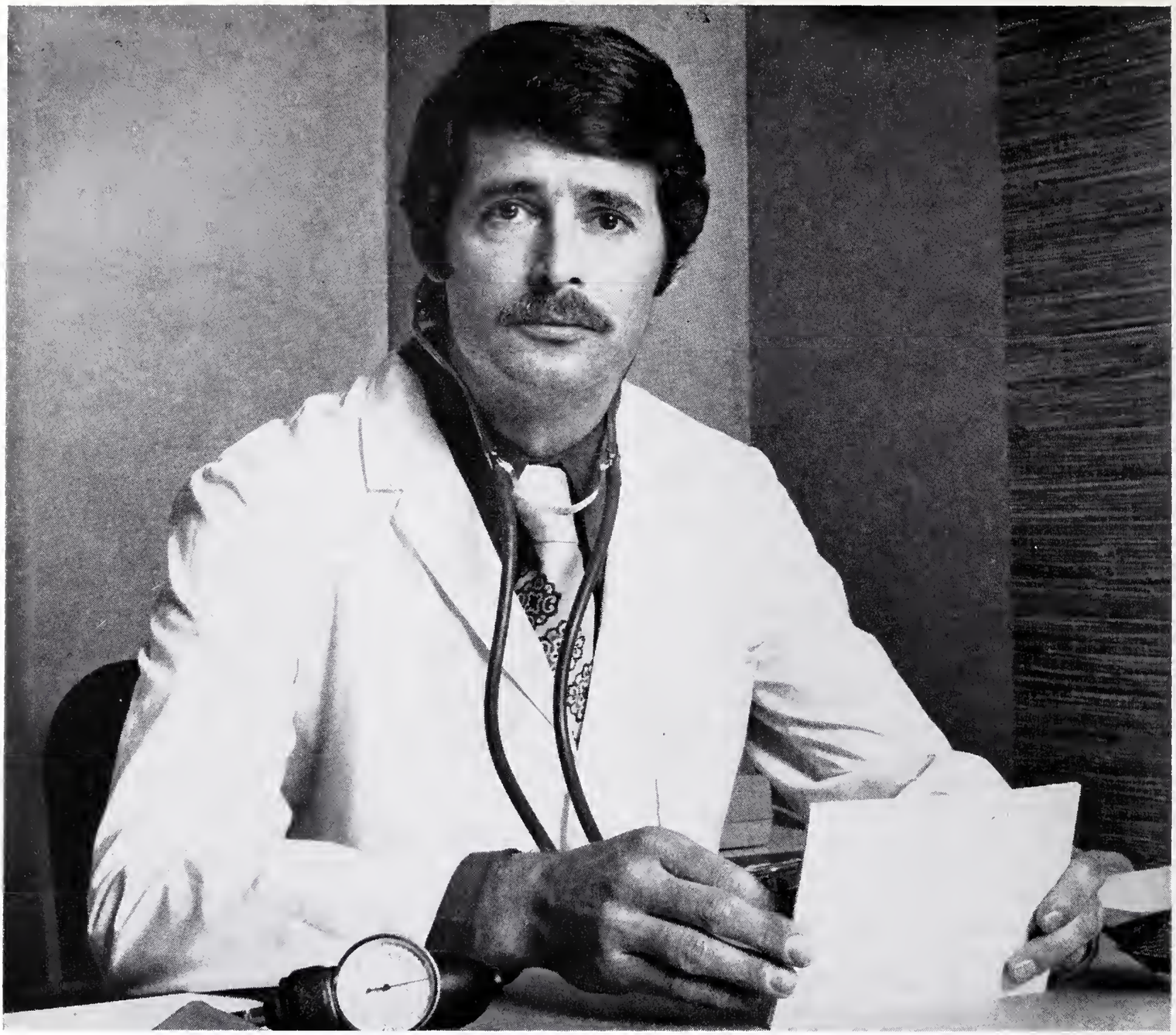
HB 307 authorizes justices of the peace and medical examiners to direct removal of the cornea in cases of accidental or unattended death where there is no protest during a four-hour period.

HB 308 provides for training of morticians and others to remove the tissue and prepare it for delivery to hospitals.

The TMA and Lions Club supported the bills.

Rep John Bryant, Dallas, and Sen Betty Andujar, Fort Worth, sponsored the bills.

Sen Betty Andujar, left, Texas Gov Dolph Briscoe, center, and C. Lincoln Williston, TMA executive director, hold a plaque presented to Sen Andujar by the Texas Lions Club.



If you take care of your people, they'll take care of you.

It's simple human relations.

To keep good people on your staff—whether you're just starting a practice, or well along in your career—you've got to pay them well. Not with just money, but with other things, like health insurance.

And, being in the medical profession, you know how important it is to provide your people with the best coverage available.

Blue Cross and Blue Shield coverage will assure you of that. We return more of our premiums in claim payments to policyholders than most other major insurance companies. And we don't set maximum dollar limits on most hospital services.

You might get group health insurance at a lower rate. But when you think of how much your people are worth to you, we think you'll find them worth every nickel that Blue Cross and Blue Shield coverage costs.

Do you think enough of your people to provide the best?

Blue Cross
GROUP HOSPITAL SERVICE, INC.
Blue Shield
GROUP LIFE & HEALTH INSURANCE COMPANY
of Texas

®, ® Registered Mark Blue Cross Association
Registered Service Mark of the National Association of Blue Shield Plans

Texas Senate approves professional liability insurance legislation

The Texas Senate passed CSHB 1048, the Medical Liability and Insurance Improvement Act of Texas, April 19.

During Senate debate, several amendments supported by the Texas Medical Association were added to the legislation.

The Texas Senators approved legislation that would place a $100,000 limit on awards for noneconomic damages such as pain and suffering.

Another TMA-supported amendment that deleted the section on screening panels was approved. The bill as written would not have allowed findings of the screening panels to be used as evidence at any subsequent trial.

For up to date legislative information the TMA news hotline provides a two minute recording on legislative issues and other medical news.

The hotline is a toll-free number, 1-800-252-9231, available 24 hours. Information is updated frequently.

The hotline will be continued through the end of the 65th session of the Texas Legislature. It is sponsored jointly by TMA's Council on Medical Legislation and Council on Communication. The legislative news is prepared by the TMA staff.

Texas medical schools receive more than $20,000 from AMA

More than $20,000 in unrestricted grants has been distributed by the American Medical Association Education and Research Foundation to the Texas medical schools.

Schools receiving the grants include Baylor College of Medicine, UT Southwestern Medical School, UT Medical School at San Antonio, Texas Tech University School of Medicine, UT Medical School at Houston, the medical program at Texas A&M University, and The University of Texas Medical Branch.

Funds are donated by physicians, the Woman's Auxiliary, and by medical families.

Nationwide, approximately $1,180,000 in unrestricted grants was distributed to medical schools as a result of fund-raising activities in 1976.

For the past 28 years, unrestricted gifts to medical schools from the foundation have averaged more than $1 million per year.

Defense Department issues new CHAMPUS regulation

A comprehensive Department of Defense Instruction/Regulation to govern all aspects of the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) has been issued by Robert N. Smith, MD, assistant secretary of defense (health affairs).

The regulation was designed to strengthen CHAMPUS and simplify its interpretation for beneficiaries, providers, claims processors and the government.

The regulation introduces an appeals procedure which provides a means for beneficiaries and providers to have disputed claims reviewed.

Provisions of the regulation will be implemented June 1, 1977, for outpatient services and supplies and new inpatient cases.

All ongoing long term inpatient cases will be reviewed on a case-by-case basis to determine if the care being rendered meets the requirements of the regulation.

Where it is determined that a case is not in compliance, beneficiaries will be extended a 90-day notice before benefits are terminated. The earliest date any such notice will go out is Aug 1, 1977.

The regulation explains and encourages responsibility on the part of the beneficiaries and sponsor to exercise care in obtaining medical services.

The new regulation does not change the essential benefit package of the CHAMPUS program. However, the regulation has set some limits on certain benefits.

The special education under the program for the handicapped is available only if the state and local school jurisdictions cannot provide or pay for adequate education services. The regulation limits benefits to three rehabilitative inpatient stays for alcoholism.

Additional information on the CHAMPUS benefits and procedures may be obtained from the CHAMPUS advisor at the nearest Uniformed Services medical facility or by writing to OCHAMPUS, Denver, Colorado 80240.

TMA creates new committee on computerized axial tomography

A new Ad Hoc Committee on Computerized Axial Tomography has been created by L. S. Thompson Jr, MD, TMA president, to insure that Texas physicians will continue to be well-represented in the many areas of health planning which will have an impact on medicine and health care delivery.

Members of the committee are J. E. Miller, MD, Dallas, chairman; John R. Derrick, MD, Galveston; Hugo E. Elmendorf, Jr, MD, Austin; Edwin R. Buster, III, MD, Austin; and Marvin C. Overton, III, MD, Fort Worth.

The committee will meet at 2:30 pm Wednesday, May 11, in Salon E of the Marriott Hotel during TMA Annual Session in Houston. The committee will report to the Executive Board.

Members of the special committee will develop a policy for judicious placement and use of computerized axial tomography scanners. The committee's findings and recommendations will be presented to the TMA Committee on Health Planning for use in the deliberations of the Health Systems Agencies and the Texas Health Facilities Commission.

Many doctors practicing defensive medicine, AMA poll shows

Three out of four American physicians are practicing "defensive medicine"—that is, ordering extra tests and procedures for patients —as a protection against potential malpractice suits, according to an American Medical Association poll.

The medical bills of the patients are increasing as a result.

More than 90 % of the poll respondents indicate they are more conscious today than in the past that they may later be sued for malpractice

A sizeable number of the doctors say they are ordering one or two more extra tests—x-rays, laboratory tests, other diagnostic procedures, and some are ordering three or four more tests. Not only are patients paying for more tests, but three out of five doctors say they had raised their own fees in the last year because of increasing malpractice premiums.

Polls show disapproval of immunization campaign

Widespread public disapproval of the handling of the A/New Jersey (swine flu) immunization campaign was shown in a recent survey by the Louis Harris polling organization.

The survey also showed that by 55% to 26%, Americans opposed HEW Secretary Joseph Califano's order to resume the vaccinations for older and chronically ill people.

The Harris organization reported that when asked, "How would you rate the US government's handling of the swine flu vaccine program—excellent, pretty good, only fair, or poor?" some 66% of those responded negatively, 29% positively, and 5% weren't sure.

Responses to another question showed that 49% of the sample of 1,466 adults polled felt that the warnings issued by the government about the potential dangers of a swine flu epidemic had been exaggerated. Some 35% disagreed, and 16% said they weren't sure.

More than 4,000 Galveston graduates hold faculty appointments at medical schools

Results from a survey by the Association of American Medical Colleges show that 4.7% of the total living graduates of The University of Texas Medical Branch (UTMB) in Galveston since 1891 (4,455) hold full-time faculty appointments at the six medical colleges in Texas and out-of-state schools.

Of the 211 graduates teaching nationwide, 64% (136) are serving in Texas.

Forty-six percent (63) of the graduates in the state are at UTMB.

Primary physicians and primary care are needed to provide health care

"The Primary Physician-Primary Care: Which Do We Want?" "We want both," answered John Millis, MD, to the question asked by the title of his Daniel Webster Kempner Memorial Lecture at the University of Texas Medical Branch in Galveston.

Dr Millis is chairman and director of the National Fund for Medical Education.

Dr Millis described the primary physician, a concept developed 10 years ago, as a doctor "who takes responsibility for continuous, comprehensive care of patients in sickness and in health."

Primary care, he said, has been in the language for 30 years and refers to episodic and discontinuous care or, cure by any means. This type of care is often referred to as treatment of the disease rather than the patient kind of medicine.

"It is disturbing to me that so many laymen and physicians believe these terms to be synonymous," he added.

The two concepts are distinct but interrelated in terms of care and both are needed to provide absolute health care, he said.

He added that primary care and primary physicians exist in the health care field but there has not been an equal emphasis on both systems. "The presence of one does not satisfy the other, when we notice the obvious problem in the lack of continuity of care (the primary physician) as seen by the patient."

Dr Millis identified the need for primary care as a "better system that can constrain medical costs and provide greater utilization of paramedical personnel." Primary care can also further public health, patient education, and help develop health services into a total system.

TMA will present medical practice workshops

The Texas Medical Association is sponsoring four separate half-day "Financial Control of Your Medical Practice" workshops during June.

The workshops will be presented by Conomikes Associates, a nationally recognized medical practice consulting firm.

Workshop topics include daily monitoring of accounts receivable, latest billing techniques, better financial controls, and better billing and collection techniques.

Registration for the workshops, designed for the physician only, is limited to 35 physicians per workshop.

All four workshops are from 1 through 5 pm, and the registration fee is $62.50.

The workshops will be presented in Fort Worth June 7, Houston June 8, San Antonio June 9, and Dallas June 17.

For more information contact Paul D. Gray, Texas Medical Association, 1801 N. Lamar Blvd., Austin, 78701.

Physicians must face influences positively, Dr LeMaistre says

Physicians and medical school administrators must take a positive approach to external influences, says Charles A. LeMaistre, MD, Chancellor of The University of Texas System.

The influences are society's attitudes toward medical care and professionals and the legislative or political force, Dr LeMaistre said in a talk sponsored by The University of Texas Medical Branch department of preventive medicine and community health.

Maintaining a positive attitude is imperative, he said, if those who feel buffeted wish to sustain high quality training and effective provision of medical care.

"We have looked at only a miniscule part of the whole picture of external influences, which often challenge the position traditionally accorded to physicians and have too often taken a negative plaint," he said.

Dr LeMaistre said that factors which often influence health care and education, such as employment practices and more liberal admission procedures, are well meaning "but the energy behind these influences needs to be rechanneled into implementing the betterment of the whole concept of health care."

There has been a change in society's attitude toward a medical profession brought about pri-

marily, he said, "because the patient has become a sophisticated consumer who is now more capable of evaluating his health care. The patient now becomes a critic of the physician and that criticism influences the care he receives," Dr LeMaistre said.

Another factor he sees as influencing medical education and patient care is a new acceptance of medical care as a basic necessity of life.

To force the issue, the federal government is requiring medical schools to follow certain rules, he said. By complying with these rules, universities have been willing to pay the price of federal help, he said, "but now the government and health care institutions have become adversaries in certain aspects of their relationship."

Dr LeMaistre said many medical schools feel that some of the regulations are damaging to the quality of their educational programs, such as the original version of the Health Manpower Act of 1976 which would have "intruded the federal government into the admission process to dictate curriculum for medical and other health professions schools and given the Secretary of Health, Education and Welfare control of all postgraduate training programs."

Grant funds available from leukemia society

Career researchers who need support for their investigations may be eligible for grants that are available from the Leukemia Society of America, Inc.

The grants, designed to encourage studies specifically in the field of leukemia and allied disorders of the blood-forming organs, are offered in three categories, all on the post-doctoral level.

A five-year $100,000 scholarship is intended for those who have demonstrated ability as independent researchers but have not yet reached the tenured level of Associate Professor.

Two-year special fellowships and fellowships at $31,000 and $25,000 respectively are for those at the intermediate and beginning stages of development. Funding in all of the categories will begin in July, 1978.

Deadline for completed applications is Oct 1, 1977. Forms may be obtained by writing to Rose Ruth Ellison, MD, Vice President for Medical and Scientific Affairs, Leukemia Society of America, Inc., 211 East 43 St, New York, NY 10017.

Doctors make 17 million house calls annually

Do doctors still make house calls?

The American Medical Association talked with doctors and patients in a small town, in a medium-sized city and in a large metropolitan area about house calls. The small town doctor still makes house calls regularly, while those in the larger communities do so much less frequently.

The physicians generally agree that they can actually do more for their patients in the hospital or in their offices, where extensive diagnostic equipment and facilities and skilled staff are at hand.

But, all also admit that in certain circumstances, the house call can be an effective and important facet of the physician-patient relationship.

The most recent statistics available showing more than 17 million house calls made annually in the United States mean that about 2% of all physician services are being delivered at home.

Patients of all income levels are visited at home. About 40% of those seen are in families with an annual income of less than $5,000 and another 40% are in families earning $10,000 and more. A further breakdown shows 25% of the doctors' house calls are in homes of less than $3,000 annual income and 21% take place in homes where the annual income exceeds $15,000. Patients in the $5,000 to $10,000 income bracket account for about 20% of all house calls.

Visits to elderly patients, persons 65 and older, are the most prevalent, accounting for 51% of all house calls. Persons in the 45 to 65 age bracket are the home patients 25% of the

Thiazides and hypertension

A balancing act: Blood pressure reduction vs potassium depletion

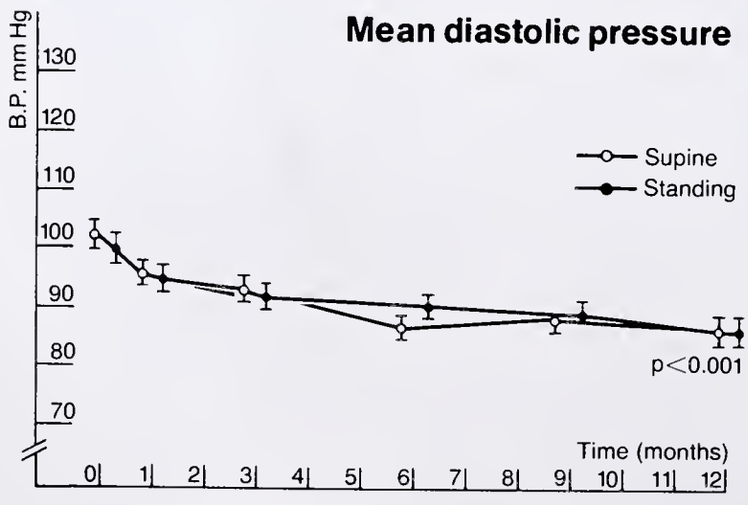
From a 1-year study of 18 patients with mild uncomplicated hypertension published in The Lancet*

Once a day

Naturetin®

Bendro-
flomethiazide
Tablets N.F.

Diastolic blood pressure down 12-15%



"The mean pretreatment blood pressure was 170/103 mm Hg (supine) and 166/100 mm Hg (standing). Diastolic pressure continued to fall over the first 6 months and then there was no further change up to 1 year...The mean blood pressure at 12 months was 153/88 mm Hg (supine) and 142/88 mm Hg (standing)."

"The patients were receiving a single daily dose of 10 mg bendrofluazide [bendroflumethiazide]...there were no apparent side effects from the medication."

*Wilkinson PR et al: The Lancet 1:759-762, 1975.

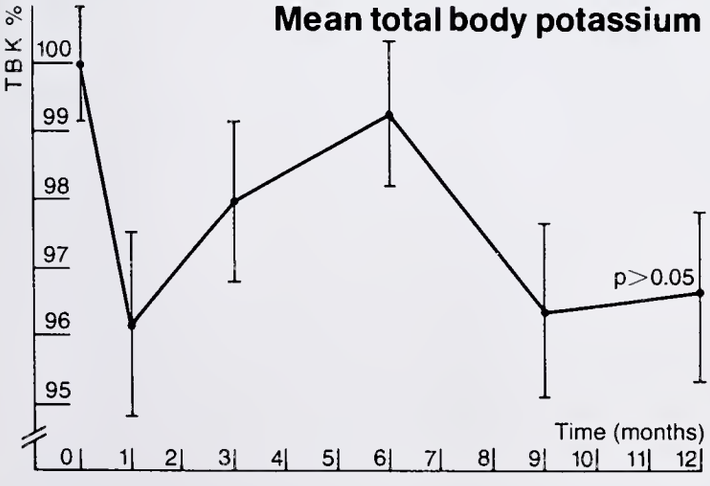
Once a day

Naturetin®

Bendro-
flumethiazide
Tablets N.F.

2.5, 5 and 10 mg

Potassium stabilized at 96% mean TBK



"The amount of potassium loss during the period of study did not seem to be clinically significant."

"A serum potassium of less than 3.5mmol per litre is often taken as the value below which potassium supplements should be given...At an arbitrary lower value for serum potassium of 3.0mmol per litre, few patients, our data suggest, would need potassium supplements. Our findings with TBK support this view..."

See next page for full prescribing information.

Once a day Naturetin® Bendroflumethiazide Tablets N.F.

NATURETIN®-2.5
NATURETIN®-5
NATURETIN®-10
Bendroflumethiazide Tablets N.F.

DESCRIPTION

Naturetin (Bendroflumethiazide Tablets N.F.) is a benzothiadiazine derivative containing a benzyl and a trifluoromethyl group. It is a potent oral diuretic and antihypertensive agent available as compressed tablets providing 2.5, 5.0, or 10 mg. bendroflumethiazide.

ACTIONS

The mechanism of action results in an interference with the renal tubular mechanism of electrolyte reabsorption. At maximal therapeutic dosage all thiazides are approximately equal in their diuretic potency. The mechanism whereby thiazides function in the control of hypertension is unknown.

INDICATIONS

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated as adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis and corticosteroid and estrogen therapy.

Bendroflumethiazide has also been found useful in edema due to various forms of renal dysfunction such as: nephrotic syndrome, acute glomerulonephritis, and chronic renal failure.

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated in the management of hypertension either as the sole therapeutic agent or to enhance the effectiveness of other antihypertensive drugs in the more severe forms of hypertension.

Usage in Pregnancy. The routine use of diuretics in an otherwise healthy woman is inappropriate and exposes mother and fetus to unnecessary hazard. Diuretics do not prevent development of toxemia of pregnancy, and there is no satisfactory evidence that they are useful in the treatment of developed toxemia.

Edema during pregnancy may arise from pathological causes or from the physiologic and mechanical consequences of pregnancy. Thiazides are indicated in pregnancy when edema is due to pathologic causes, just as they are in the absence of pregnancy (see WARNINGS). Dependent edema in pregnancy, resulting from restriction of venous return by the expanded uterus, is properly treated through elevation of the lower extremities and use of support hose; use of diuretics to lower intravascular volume in this case is illogical and unnecessary. There is hypervolemia during normal pregnancy which is harmful to neither the fetus nor the mother (in the absence of cardiovascular disease), but which is associated with edema, including generalized edema, in the majority of pregnant women. If this edema produces discomfort, increased recumbency will often provide relief. In rare instances, this edema may cause extreme discomfort which is not relieved by rest. In these cases, a short course of diuretics may provide relief and may be appropriate.

CONTRAINDICATIONS

Bendroflumethiazide is contraindicated in anuria.

It is also contraindicated in patients who have previously demonstrated hypersensitivity to it or other sulfonamide-derived drugs.

WARNINGS

Bendroflumethiazide should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may be additive or may potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

Usage in Pregnancy. Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers. Thiazides appear in breast milk. If use of the drug is deemed essential, the patient should stop nursing.

PRECAUTIONS

Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: dryness of the mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Latent diabetes mellitus may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use. If emergency surgery is indicated, preanesthetic and anesthetic agents should be administered in reduced dosage.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS

Gastrointestinal System: anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), and pancreatitis. *Central Nervous System:* dizziness, vertigo, paresthesia, headache, and xanthopsia. *Hematologic:* leukopenia, agranulocytosis, thrombocytopenia, and aplastic anemia. *Dermatologic-Hypersensitivity:* purpura, photosensitivity, rash, urticaria, and necrotizing angiitis (vasculitis, cutaneous vasculitis). *Cardiovascular:* orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates or narcotics. *Other:* hyperglycemia, glycosuria, occasional metabolic acidosis in diabetic patients, hyperuricemia, allergic glomerulonephritis, muscle spasm, weakness, and restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION

Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

Diuretic: The usual dose is 5 mg. once daily, preferably given in the morning. To initiate therapy, doses up to 20 mg. may be given once daily or divided into two doses. A single daily dose of 2.5 to 5 mg. should suffice for maintenance.

Alternatively, intermittent therapy may be advantageous in many patients. By administering the preparation every other day or on a three to five day per week schedule, electrolyte imbalance is less likely to occur; however, the possibility still exists.

In general, the lowest dosage that achieves the therapeutic response should be employed.

Antihypertensive: The suggested initial dosage is 5 to 20 mg. daily. Maintenance dosage may range from 2.5 to 15 mg. per day, depending on the individual response of the patient. When the diuretic is used with other antihypertensive agents, lower maintenance doses for each drug are usually sufficient.

STORAGE

Store at room temperature; avoid excessive heat.

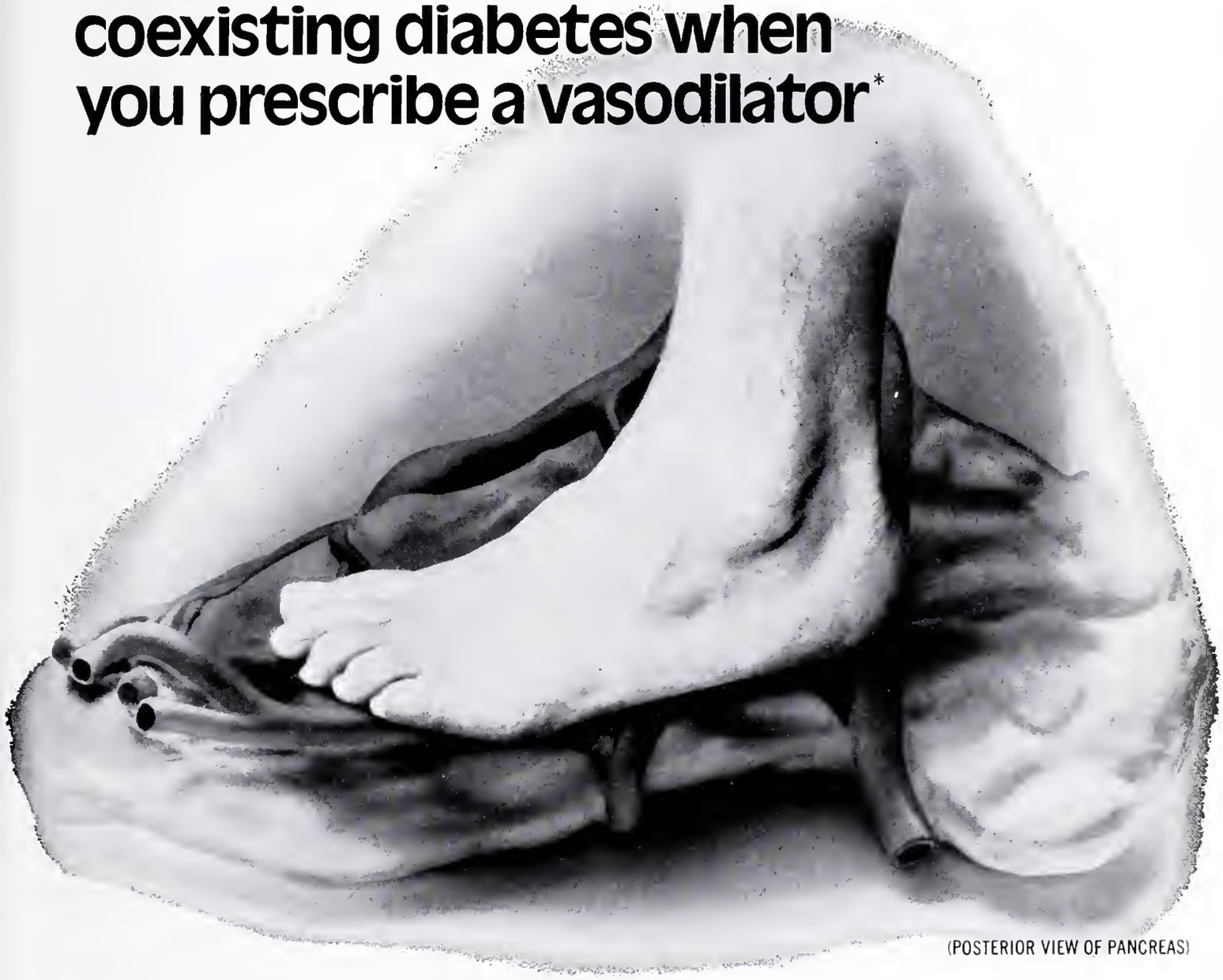
HOW SUPPLIED

2.5 mg. tablets in bottles of 100, 5 mg. tablets (scored) in bottles of 100 and 1000, and 10 mg. tablets (scored) in bottles of 100.

SQUIBB®

©1977 E.R. Squibb & Sons, Inc. 477-501

consider the effect on coexisting diabetes when you prescribe a vasodilator*



(POSTERIOR VIEW OF PANCREAS)

no interference in the management of the diabetic patient has been reported with

VASODILAN®
(ISOXSUPRINE HCl)

the compatible vasodilator TABLETS, 20 mg.

*__Indications:__ Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily.

Intramuscular: 5 to 10 mg.(1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

Mead Johnson LABORATORIES

© 1977, MEAD JOHNSON & COMPANY, EVANSVILLE, INDIANA 47721 U.S.A. MJL5-4117R1

time, with illnesses of children from ages 5 through 14 being the reason doctors go to the home 7% of the time. All other age groups combined accounted for the remaining 17% of physician visits to the home.

Of those patients seen at home, 56% are disabled or limited in activity, with 44% having no problems of limitation.

Far more women and girls, 62%, are seen by doctors on house calls than are men and boys.

The vast majority, 70%, of house calls are made in cities, with rural patients accounting for 27% of the total number made, and farm family members representing 3% of the home visits by physicians.

Almost half, 44%, of the house calls are made in the northeastern region of the United States, with the north central and southern states residents accounting for 23% each, and visits by doctors in western states providing the remaining 10%.

General practitioners or family physicians are the groups visiting the homes most often—77% of the time, with internists providing 8% of the house call care, and all other specialists representing the remaining 15% of home visits.

Texas agency publishes guide to rural health care delivery

The Texas Department of Community Affairs has produced a guide to health care delivery in rural areas prepared specifically for the small rural community faced with shortages of physicians or outdated and inadequate health facilities.

Tell Me Where It Hurts discusses reasons why the solutions to rural health problems may depend on more than just getting additional funds or building a new clinic or hospital. The guide reviews traditional ways of reorganizing available resources and introduces alternative types of organization for communities to consider.

The guide also contains an appendix section describing financial, technical, and advisory resources available to help rural communities meet their individual health needs.

For more information contact the Texas Department of Community Affairs, Box 13166, Capitol Station, Austin, 78711.

Correction made in criteria listed for brain death

A story on page 16 of the April issue of *Texas Medicine* describing the new criteria for brain death developed by the National Institute of Neurological and Communicative Disorders and Stroke incorrectly listed one of the criteria as a "silent electrocardiogram for 30 minutes . . ."

The guideline calls for a silent electroencephalogram for 30 minutes.

The entire second recommendation should be:

"The brain is completely unresponsive, breathing without the machines has stopped, pupils are dilated, reflexes such as blinking are missing, and the electroencephalogram is silent for 30 minutes at least six hours after the stroke or accident."

The criteria were originally listed in the March 7 issue of the *Journal of the American Medical Association.*

Reye syndrome cases reported in Texas

Three cases of Reye syndrome were diagnosed at Parkland and Children's Memorial Hospitals in Dallas in February 1977, reports the Texas Department of Health Resources.

James P. Luby, MD, associate professor of internal medicine and chief of infectious disease at The University of Texas Health Science Center at Dallas, Southwestern Medical School, reported the cases. Each of these cases was preceded by influenza B illness.

Another case has been reported from the Houston area.

Reye syndrome may be defined as an acute, non-inflammatory encephalopathy combined with fatty degeneration of the viscera with unknown etiology.

The syndrome is characterized by acute onset of vomiting and altered mental status which may include brain stem involvement and often occurs in the convalescent stages of a viral-like illness.

SCOT and blood ammonia levels usually are high and coagulation abnormalities may be present.

The age of patients ranges from a few months to the late twenties with more than 60% of the cases being under 16 years of age. Males and females are equally affected.

Reported cases in non-caucasians are rare. The incidence is higher in rural than urban areas even though attack rates for influenza B did not differ in urban and rural locales.

The death to case ratio is approximately 40-50%.

Studies sponsored by the Center for Disease Control demonstrate two distinct groups of cases of Reye syndrome. The first group includes clusters of cases in older children (median age 11) which correlate both temporally and geographically with influenza B outbreaks.

The second group consists of cases in younger children (median age 6) which occur sporadically throughout the year, are usually isolated in time and geographic area, and are associated with a number of viral agents, the most common of which is the varicella virus.

Further study is needed since viral infection alone does not provide a satisfactory explanation of the patho-physiology or the epidemiology of Reye syndrome. Related factors which have been suggested include environmental location, toxins, enzyme deficiencies, and genetic predisposition.

Even though it is not required in Texas, routine physician reporting of Reye syndrome is encouraged because of its connection with influenza B, which appears to be the predominant flu virus in 1977.

To help standardize data collection, CDC case investigation forms and recommended protocol for obtaining appropriate specimens for diagnosis are available from the Bureau of Communicable Disease Services, Texas Department of Health Resources.

Preliminary analysis of Texas mortality records reveals 24 deaths from Reye syndrome in 1976. In the years 1969 through 1975, there were 842 deaths. Detailed analysis of these cases is in progress.

A. Rex Kirkley, MD, is medical director of Texas Medical Foundation

A. Rex Kirkley, MD, has joined the Texas Medical Foundation as medical director and will assume the title of president subject to corporate body approval of bylaws changes.

In operation since 1972, the Texas Medical Foundation (TMF) supports physicians and hospitals in responding to large public and private health care programs.

Dr Kirkley said that government intervention is causing increased concern among those involved in health care delivery.

"Government is getting more involved in the administrative aspects of health care and using many tax dollars to do so," Dr Kirkley said, "but increased bureaucratic intervention causes more problems. We at TMF are working as a buffer between health care professionals and government programs to solve these problems."

Dr Kirkley said another concern is medical care versus the dollar availability to purchase such care. "The public has been trained to expect the benefits of good medical care and it is our responsibility to see that quality care is given to the people who need it. Here again, the Texas Medical Foundation works with physicians to develop support programs to improve health care delivery."

As president, Dr Kirkley will work to build good relations between TMF and medical care professionals and other organizations. He intends to strengthen ties with the Texas Medical Association (TMA) and the Texas Osteopathic Medical Association (TOMA) and thus reduce duplication of work generated by these organizations.

He came to TMF from Belton, Tex, where he was in family medical practice from 1947 to 1963 and from 1969 through March of 1977. During his leave from private practice, he served as Medical Director of Blue Cross-Blue Shield of Texas and then moved to Washington, DC, where he spent two years coordinating activities in the Washington office of the American Medical Association.

His involvement in medical affairs includes 30 years as an active member of the Texas Medical Association and membership on the Medical Advisory Committee of the Texas Department of

Public Welfare and the TMA Council on Tax-Financed Health Care Programs. He has also been an active civic leader in his home town of Belton, and held posts of mayor, city councilman, and Chamber of Commerce president.

Dr Kirkley and his wife will maintain a residence in Austin where the TMF's central office is located.

A. Rex Kirkley, MD

AMA approves Dolly Vinsant Memorial Hospital for continuing medical education

The American Medical Association Council on Medical Education has approved two-year accreditation of Dolly Vinsant Memorial Hospital, San Benito, Tex, for continuing medical education.

Bryan V. Williams, MD, Houston, chairman of Texas Medical Association's Committee on Continuing Education, will present the certificate of accreditation to a hospital representative during the May meeting of the TMA Committee on Continuing Education.

Accreditation means that the 59-bed hospital can offer continuing medical education programs for Category 1 credit included in the AMA Physician's Recognition Award.

The AMA council's approval was based on a recommendation from TMA's Committee on Continuing Education. George Race, MD, a committee member, surveyed the hospital Oct 7, 1976.

The committee's letter to Rutledge W. Howard, MD, secretary to AMA's Advisory Committee on Continuing Medical Education, cited Dolly Vinsant Memorial Hospital as "a prototype for the many small Texas hospitals offering continuing education opportunities to local physicians." The accreditation was granted for two years on the basis that the hospital's continuing education program is new and has not yet fulfilled its potential.

TMA's program of accreditation, aimed at institutions and organizations of local scope and focus in the field of continuing medical education, was approved by the AMA in 1974. Since then, the Committee on Continuing Education has conducted two pilot surveys (including Dolly Vinsant Memorial Hospital) as part of its study to determine the feasibility of setting up a permanent accreditation program. The first survey was of M. D. Anderson Hospital and Tumor Institute, Houston in November 1975. The AMA approved a full four-year accreditation of M. D. Anderson in March 1976.

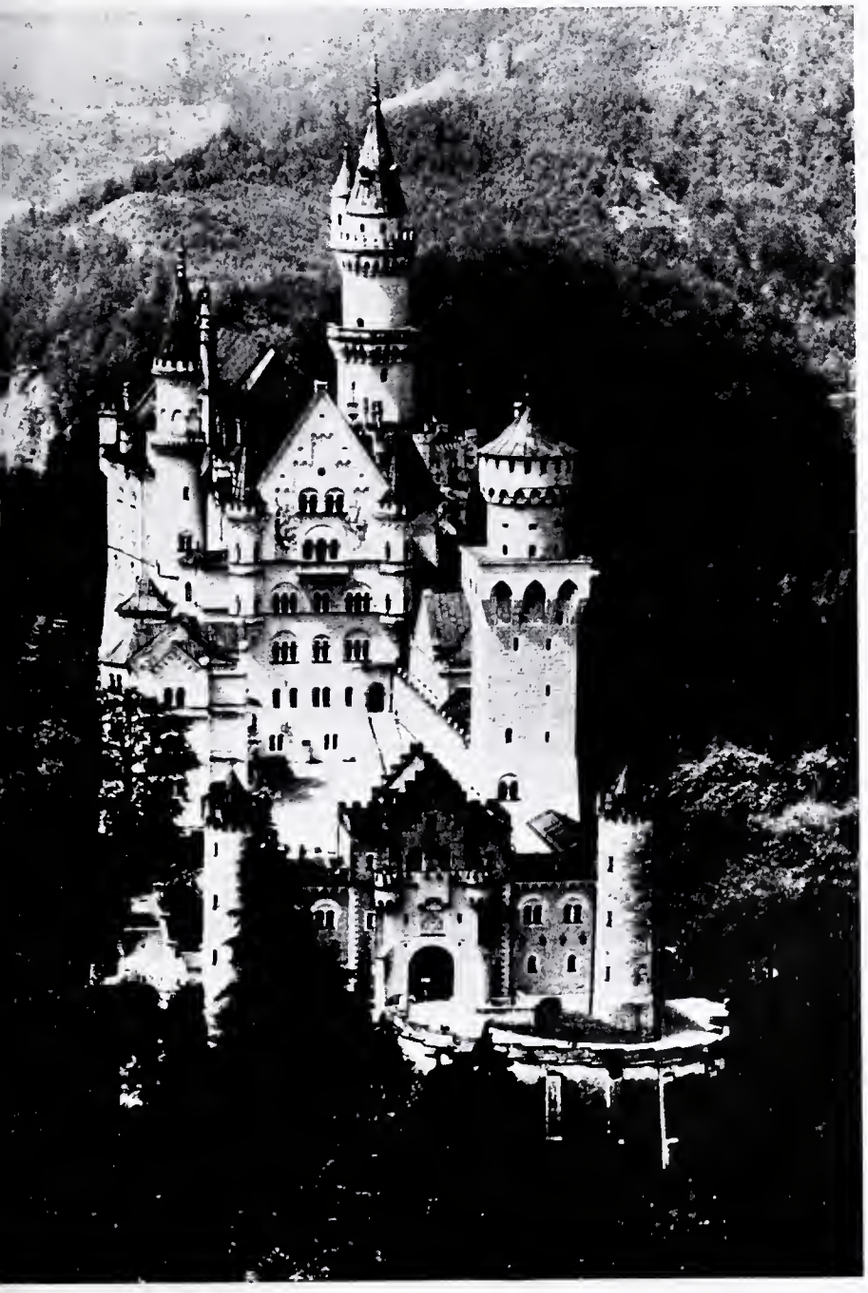
Following this two-year study, the Committee recommended that Texas Medical Association conduct an ongoing accreditation program. In November 1976, the TMA House of Delegates approved the committee's recommendation that a subcommittee on accreditation be appointed. The subcommittee, which is scheduled to conduct an organizational meeting during the Annual Session, will comprise 20 members representing various sectors of the medical community—education, private practice, specialty societies, and hospitals.

The committee also recommended an accreditation filing fee of $150 to assist in the conduct of the program. The TMA Board of Trustees approved the fee during its meeting Jan 16, 1977.

To help interested institutions and organizations prepare for a survey, the committee has developed a set of Guidelines for Accrediting Continuing Medical Education Programs in Texas. The Guidelines and applications for accreditation are available from Committee on Continuing Education, Texas Medical Association,

TEXAS MEDICAL ASSOCIATION

European ADVENTURE



Depart from Dallas–Fort Worth or Houston on July 28, return Aug. 10

(Note: August 1–14 trip is filled)

Discover fairytale castles set midst deep, dark green forests . . . lush emerald meadows and valleys nestled between rugged mountains under the bluest of skies.

This and more awaits you when you join us for a two-week, do-as-you-please holiday in ZURICH, Switzerland; MUNICH, Germany; and VIENNA, Austria.

Price is a low $1398 , which includes round-trip air fare via chartered jet, accommodations at deluxe hotels in each city, chartered first-class European express trains between cities, full American breakfasts and dinners at a selection of the finest restaurants. You can't find a better travel bargain anywhere.

Join us today for the Adventure of a lifetime at charter-cost savings.

Send To: TEXAS MEDICAL ASSOCIATION
1801 NORTH LAMAR BLVD.
AUSTIN, TEXAS 78701

Enclosed is my check for $_____($100 per person) as deposit.

NAMES _____

ADDRESS _____

CITY _____ STATE _____

ZIP _____ PHONE _____

A Non-Regimented INTRAV Deluxe Adventure

1905 N Lamar Blvd, Austin 78705.

The AMA's experience in conducting surveys shows the average time span between receipt of the completed pre-survey questionnaire and final action to be approximately nine and one-half months.

Public confidence declines in federally run health plan

There has been a significant decline in the number of Americans who want to see a national health care plan administered and controlled by the federal government.

At the same time, there has been an increased interest in having health care administered by local organizations.

These are the findings of a Gallup Survey that compared public attitudes toward various proposals for delivery of health care in 1972 and in 1976.

The question asked of those polled in 1972 and again in 1976 was: "Congress may soon pass some form of national health insurance partly paid for out of taxes. Who would you prefer to run this program?"

Four years ago 40% of those polled said they would prefer the federal government. In 1976 this figure dropped to 28%.

In 1972, 13% favored a health plan run by local citizen organizations and doctors. This figure increased to 20% in 1976. Those favoring a program run by local government increased from 7% to 11% in the four years. Preferences for state government or insurance company supervision remained about the same.

The poll also asked: "Which health care system do you think would be the best way to provide adequate medical and health care for all people?"

The largest proportion, 39%, favored a system of compulsory health insurance covering everybody who has a job and his or her family, with employers and employees sharing the costs, and the federal government providing health insurance only for people who do not have jobs. This figure varied only one percentage point in four years.

However, the survey shows a decline in support for the present system of voluntary medical care and an increase in support for a universal system paid through taxes. Support for the present system declined by five percentage points between 1972 and 1976 (from 30 to 25), while support for a universal system increased by six percentage points (from 22 to 28).

A mixed system is still favored by most Americans. If those favoring the present system (25%), is added to those who favor the public/private alternative (39%), there are two in three (64%) preferring a combination system of public and private participation.

Both surveys were conducted among representative national samples of 1500 respondents by personal interview.

Pediatrics committee recommends evaluation of variety of special diets

"Recent increases in nutritional practices that are potentially hazardous to the health of children," including the overuse of certain vitamins and the use of a Zen Macrobiotic diet for growing children have caused the American Academy of Pediatrics' Committee on Nutrition to express concern.

The committee said the beneficial claims made for a variety of special diets "should be subjected to critical, scientific evaluation."

The committee commented on a variety of nutritional practices. "Many individuals and population groups have practiced vegetarianism on a long-term basis and have demonstrated excellent results," the committee said. A problem with the diets is the tendency to be so high in bulk that they may not meet caloric needs. Another problem is the need to supply adequate protein.

"Perhaps the most dangerous of the current diets," according to the committee, is the Zen Macrobiotic Diet. The high-level diets are usually nutritionally unbalanced and low in caloric intake, the committee said.

Large doses of Vitamin A, "can produce serious toxic effects in children, including anorexia, desquamation of the skin, increased intracranial pressure, and x-ray changes in the long bones," the committee said.

Noting that organic foods generally are more expensive than their nonorganic counterparts, the committee said, "there is no compelling evidence that the high cost of these produces re-

Doctor, do you think your malpractice insurance premiums are too high?

Very likely you <u>are</u> paying more than you need to. Most insurance companies base their rates on nationwide experience — which includes parts of the nation with traditionally high losses. And, with the ordinary company, profits from underwriting, investments and reserves for unreported or unpaid claims are paid as dividends to their stockholders, not in savings to you!

BUT, NOT IF YOU INSURE WITH API!

API is a multiple-line Texas insurance company owned and controlled by the physicians it insures. ALL earnings — underwriting profits, investment income, unpaid reserves — are returned to members in reduced premiums and other benefits.

And that's not all. You'll have the advantage of a peer review group to screen out claim-prone applicants and provide claim review with defendant doctor and attorney. You'll get legal representation by a nationally recognized law firm with a history of successful, tough defense of malpractice suits.

You'll be protected by API's non-assessable, innovative policy designed to save you money. While it gives you the security of an occurrence-type policy form, you aren't charged for that expensive provision so long as you remain a subscriber. If, for any reason, the policy is terminated, then occurrence coverage is guaranteed indefinitely by the payment of only two moderate premiums — which are based on *actual* experience rather than estimates of future losses.

API has grown to over three quarters of a million dollars in policyholders surplus — net worth. (Some companies advertise their total assets, which of course are meaningless until reduced by liabilities to arrive at net worth).

Doctor, find out how to join your colleagues who have learned the way out of the professional liability dilemma. Call or write today!

AMERICAN PHYSICIANS INSURANCE EXCHANGE

1400 FRITO-LAY TOWER • DALLAS, TEXAS 75235 • PHONE: (214) 350-6661

API is reinsured by one of America's largest reinsurance groups – rated A+AAAAA by A.M. Best.

sults in concomitant benefit to the consumer."

"There is a widespread misconception that high-protein diets improve athletic performance," the committee said. "The major dietary need of athletes is calories, and protein is rarely a limiting factor," the committee concluded.

TMA Woman's Auxiliary sponsors "A Day with your Legislator"

More than 250 persons attended the legislative program, "A Day with your Legislator," sponsored by the Woman's Auxiliary to the Texas Medical Association in Austin Feb 16.

Auxiliary members, physicians, and Texas legislators participated in the seminar and luncheon at the Driskill Hotel to provide an update on Texas legislation.

Mrs. John C. Kennedy, Houston, the Auxiliary legislative chairman, presided at the meeting.

Jack Maroney, a member of the TMA Legal Counsel of Brown, Maroney, Rose, Baker, and Barber, presented an update on the medical malpractice insurance situation. Maroney provided summaries of HB 370 by Rep Pike Powers, Beaumont, and SB 103 by Sen Ray Farabee, Wichita Falls, the companion bills endorsed by TMA dealing with the medical malpractice insurance situation.

Ace Pickens, also a member of the TMA Legal Counsel, provided a briefing on additional legislative matters affecting medicine. Pickens presented short summaries of bills about medical education, licensing of health care providers, abortion, workmen's compensation, and acupuncture. At least 350 medically related bills will be considered during this session, Pickens said.

A special corsage was presented to Sen Betty Andujar, Fort Worth, a member of the TMA Auxiliary.

After the luncheon Mrs. Ed W. Schmidt, presented a summary about the activities and programs of TEXPAC.

Coming next month

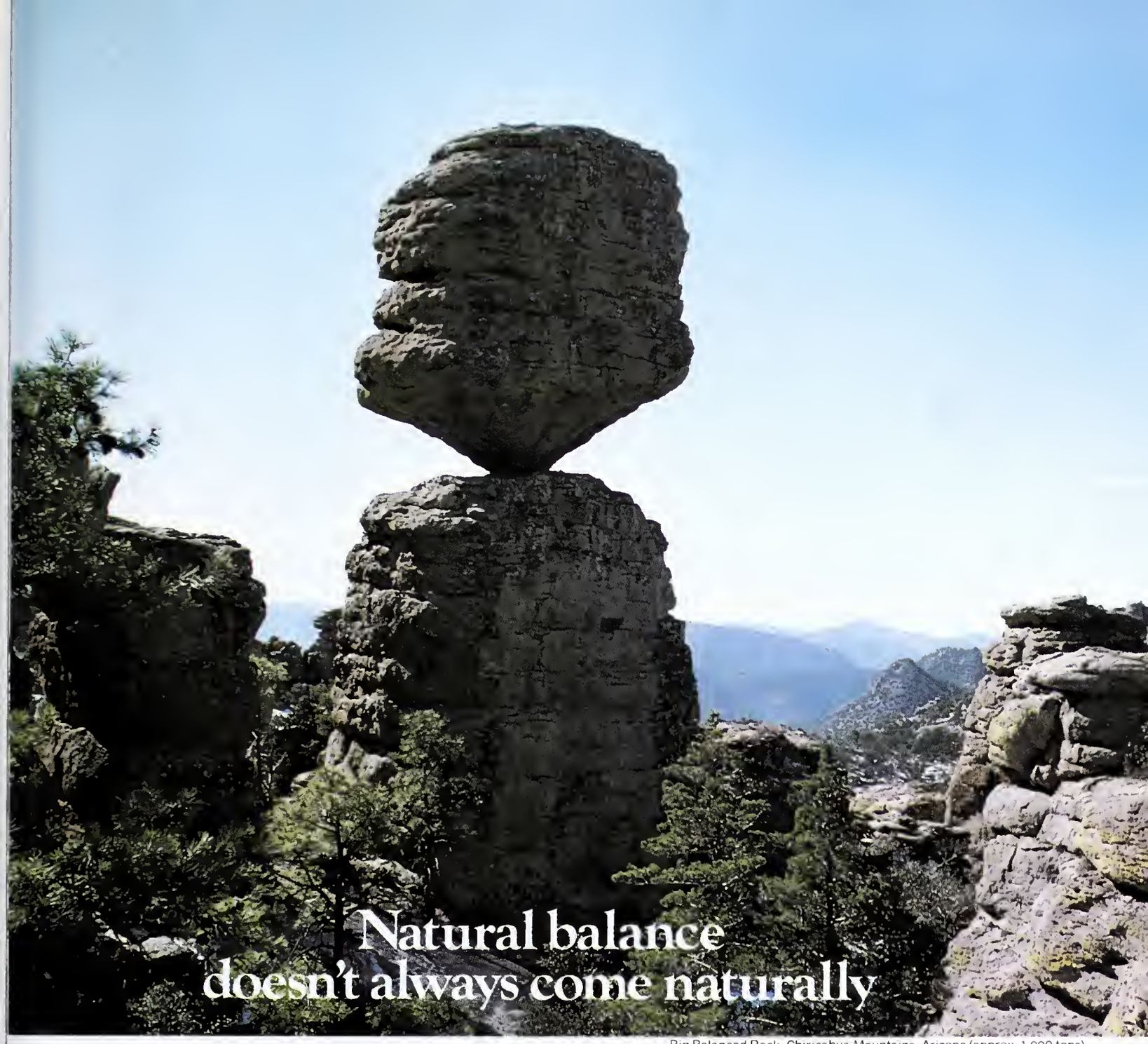
Articles scheduled for publication in June are on coronary artery bypass; long-term clinical assessment of patients with "in-hospital crescendo angina" treated by emergency vein grafting; anterior tibial arteriovenous fistula following closed fracture of the tibia; evaluation and treatment of facial nerve paralysis; etiology of traumatic spinal cord injury; and hyperkinesis: the child with excessive activity.

Investment performance for TMA Members' Retirement Plan and Trust

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1977 Through 3/31	3 Years Ended 12/31/76	5 Years Ended 12/31/76	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	− 9.1%	− 9.3%	− 8.3%	1.8%
Loomis-Sayles Mutual Fund	− 8.7%	− 1.6%	− 4.4%	3.4%
Mercantile Bank Equity Fund	− 8.4%	+ 5.9%	−17.8%	4.0%
Mercantile Bank Fixed Income Fund	− 2.2%	+ 0.2%	− 5.5%	7.5%
T Rowe Price Growth Stock Fund	−12.5%	− 2.6%	−16.6%	2.3%
T Rowe Price New Income Fund	− 1.7%	+ 2.7%	N/A	7.8%
Stein Roe & Farnham Balanced Fund	− 7.5%	− 0.5%	− 2.7%	3.3%
Standard & Poor 500 Stock Average	− 8.4%	+10.4%	+ 5.3%	
Dow Jones Industrial Average	− 8.5%	+18.1%	+12.9%	

*Includes reinvested capital gains distributions.



Big Balanced Rock, Chiricahua Mountains, Arizona (approx 1,000 tons)

■ **Most Widely Prescribed**—Antivert is the most widely prescribed agent for the management of vertigo* associated with diseases affecting the vestibular system such as Menière's disease, labyrinthitis, and vestibular neuronitis.

■ **Relief of Nausea and Vomiting**—Antivert/25 can relieve the nausea and vomiting often associated with vertigo.*

■ **Dosage for Vertigo*** —The usual adult dosage for Antivert/25 is one tablet t.i.d.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25

(meclizine HCl) 25 mg. Tablets
for vertigo*

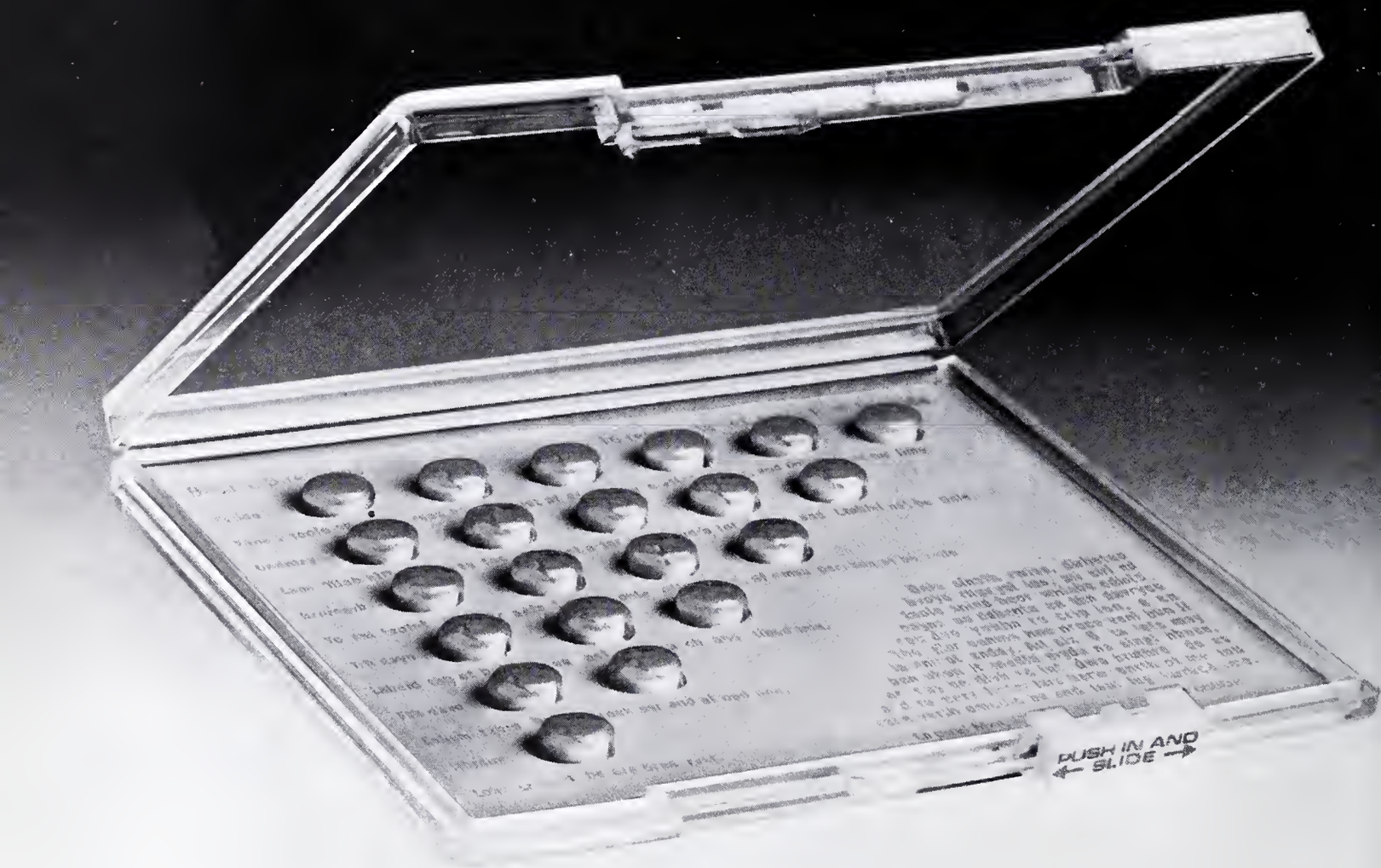
Upjohn

The Upjohn Company, Kalamazoo, Michigan 49001

Medrol® 4 mg Dosepak*

methylprednisolone, Upjohn

The explicit printed dosage instructions that accompany each Dosepak make it easy for the patient to understand and follow the dosage regimen.



*Trademark

J 5741-4

©1977 The Upjohn Company

CAPITAL COMMENTS

WASHINGTON: LIAISON COMMITTEE ON MEDICAL EDUCATION. A two-year extension of the recognition of the Liaison Committee on Medical Education (LCME) as the accrediting body for medical schools has been recommended by the Office of Education's Advisory Committee on Accreditation and Institutional Eligibility to the U S Commissioner of Education. The recommendaton was made over the opposition of a bureau of the Federal Trade Commission. The LCME is made up of six representatives from the AMA, six from the Association of American Medical Colleges, a government member, and two public figures.

WASHINGTON: LAETRILE. "Quality patient care would suffer if laetrile were made available without compliance with the law," the AMA said in a statement to the Food and Drug Administration (FDA). The AMA said it supports the FDA's contention that laetrile is a "new drug" and said it "should be subjected to the requirements of the law for approval." Laetrile should not be distributed in interstate commerce, the AMA said, "until such time as its safety and efficacy for the treatment of cancer have been established through controlled preclinical and clinical experimentation."

WASHINGTON: FRAUD AND ABUSE IN FEDERAL HEALTH PROGRAMS. HEW has called in the FBI to work on fraud and abuse in federal health programs. HEW Secretary Joseph Califano said FBI agents will work "full blast" on Medicare and Medicaid investigations until his inspector general can get "up to full speed." Until last year HEW had no investigative unit.

WASHINGTON: INSPECTOR GENERAL OF HEW. Thomas D. Morris, a member of the senior staff of the Brookings Institution, was named to the newly created post of Inspector General of HEW. The job was established by Congress last year to oversee a $25 million program to find fraud and abuse in various HEW programs, especially Medicaid. Morris will have a staff of 1,000 auditors and 100 investigators. Morris was Assistant Secretary of Defense in charge of the cost reduction program and procurement operations from 1961 to 1968 and was Assistant Comptroller General from 1970 to 1975. He will be responsible both to the HEW Secretary and to Congress.

WASHINGTON: HEALTH PLANNING LAW. The House Commerce subcommittee on health has approved a one-year extension of the Health Planning Act. Rep Paul Rogers (D-Fla) the subcommittee chairman, said he intends to pass simple extensions for most of the health programs scheduled to expire this year, with full-scale reviews on tap for 1978. However, his subcommittee made some changes in its one-year extension of the Health Manpower Law, including a one-year delay in the requirement that foreign medical graduates pass equivalency examinations.

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber, Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

SAN FRANCISCO: MEDICOLEGAL SYMPOSIUM. The AMA's two top officers speaking at the AMA-American Bar Association Medicolegal Symposium in San Francisco, called for cooperation between the professions to help solve mutual problems. AMA president Richard E. Palmer, MD, said, "There is a danger that in the heat and strife of the moment, we may allow a permanent rift to develop between our two professions." He termed it "an irony of the highest order" that federal assaults against ethical restrictions on advertising are being mounted on behalf of the consumer "when the truth is these ethical principles were enacted by our respective professions early in this century to prevent public exploitation through false testimonials, exaggeration, and misrepresentation." The present confrontation between physician and attorneys over medical liability problems is the result of attempts by both professions to do their best for patient and plaintiff, said AMA president-elect John H. Budd, MD. "Certain social trends, along with some aspects of the tort liability system itself, have created the difficulties," he said.

WASHINGTON: HEALTH CARE FINANCING ADMINISTRATION. HEW Secretary Joseph Califano has named Robert Derzone, University of California Director of Hospitals and Clinics, as the Director of the Health Care Financing Administration (HCFA), the newly announced HEW office which will administer federal programs in Medicare, Medicaid, quality assurance, and PSRO. In making the announcement Secretary Califano said Derzon's first two priorities would be controlling hospital costs and overseeing the development of HCFA. Medicare eligibility and claims processing functions will not be transferred to HCFA, but will remain the responsibility of the Social Security Administration.

Just what do you get for your AMA dues?

You get a package of personal and professional benefits and services that are the most extensive of any professional organization.

You get group insurance programs that provide coverage at far lower costs than individual coverage. They include: Group Life Insurance, Excess Major Medical, Disability Income Insurance, Supplemental "In Hospital" Insurance, Accidental Death and Dismemberment Plan, and Office Overhead Insurance.

You get publications to keep you abreast of medical and health developments: *JAMA*, *American Medical News*, and one of nine specialty journals.

There's the AMA Members Retirement Plan. Professional practice management information and guides. Authoritative legal information. Continuing medical education. The nation's largest physician placement service. The research resources of one of the nation's greatest medical libraries.

These are just a few of the broad range of benefits you get for your dues. Even more important, you get a strong and effective spokesman to represent you, your interests, and your views.

Join us.
We can do much more together.

Dept. of Membership Development
American Medical Association
535 N. Dearborn St./Chicago, IL 60610

Please send me more information on the AMA and AMA membership.

Name _____

Address _____

City/State/Zip _____

MEDICAL ARTS CLINIC ASSOCIATION of corsicana

DERMATOLOGY & SYPHILOLOGY
JOSEPH M. GLICKSMAN, M.D., F.A.A.D.*
J. D. SMITH, M.D., F.A.A.D.*

EAR, NOSE, & THROAT
PHILLIP M. AWTREY, M.D., F.A.A.O.O.*

GENERAL & VASCULAR SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S.*
E. SCOTT MIDDLETON, M.D., F.A.C.S.*

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
ALLEN M. JONES, M.D.*
JOHN D. NELSON, M.D.*
L. BRYAN COTTON, JR., M.D.*
KENT ROGERS, M.D.

FAMILY PRACTICE DEPARTMENT
ENNIS, TEXAS
W. B. KINZIE, M.D.*

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
W. GENE MURFF, M.D., F.A.C.O.G.*
NEAL GREEN, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D., F.A.A.O.O.*

ORTHOPAEDIC SURGERY
WALLACE E. LOWRY, JR., M.D.*
JAMES A. DOTSON, M.D.*

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D., F.A.A.P.*

UROLOGY
WILLIAM V. HALL, M.D.*

EXECUTIVE DIRECTOR
DON L. BOWEN, M.G.M.A.

* DIPLOMATE OF THE AMERICAN BOARD

TRAVIS CLINIC FOUNDATION AND TRAVIS CLINIC ASSOCIATION

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D., Emeritus
Ken E. Kuykendall, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
Mary A. Bone, M.D.
J. A. Armstrong, M.D.
D. B. Turner, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Dermatology:
T. S. Arrington, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

Podiatry:
Daniel H. Phelps, D.P.M.

Psychology:
Charles T. Fries, Ed.D.

Business Manager:
Gerald L. Burks

We have your best interest at heart.

Give Heart Fund
American Heart Association

NATIONAL STUDENT RESEARCH FORUM

The American Medical Student Association and The University of Texas Medical Branch will present the National Student Research Forum, May 4-7, 1977 in Galveston, Tex. The forum is open to medical students, graduate students associated with medical schools, interns and residents, who will compete in one of three major categories based on their classification at the time of participation. Research in both clinical and basic sciences will be included. The Awards Luncheon, featuring the presentation of Excellence of Research Awards, is scheduled for Saturday, May 7.

Contact: Room 209, Libbie Moody Thompson Basic Sciences Bldg, UT Medical Branch, Galveston, Tex 77550.

TEXAS ASSOCIATION OF HOMES FOR THE AGING

Cost related reimbursement, workmen's compensation, and social/activity services will be covered in training sessions presented during the 18th Annual Meeting of the Texas Association of Homes for the Aging. The meeting takes place at the Albert Thomas Convention Center and Rice-Rittenhouse Hotel in Houston, May 23-26, 1977. The Spouses' Outing Tuesday to the Sam Houston House is a new feature on this year's program. The activities will begin with a Board Meeting Monday, May 23, at the Rice-Rittenhouse Hotel.

Contact: Texas Association of Homes for the Aging, Box 15587, Austin, Texas 78761.

TEXAS MEDICAL ASSOCIATION

Medical leaders from across the nation will participate in the Texas Medical Association's 110th Annual Session in Houston, May 11-15, 1977. The technical exhibits at the Shamrock Hilton Hotel will give physicians an update on the latest in pharmaceutical products, medical supplies, office equipment, insurance, and investment fields. The Session also features a Physicians' and Spouses' Art Exhibition, sports events and special programs and symposia. Rape, sports medicine, aging, cardiovascular diseases and emergency medical services, maternal health, and school health are among the topics to be addressed during the special programs and symposiums. A new feature for the 1977 Session will be a Dialogue Program supported by a grant from the Pfizer Laboratories and Roerig Divisions, of Pfizer Pharmaceuticals. Physicians can earn up to 32 credit hours under Category 1 of the AMA Physician's Recognition Award during the Session. The House of Delegates has been scheduled to meet Thursday, May 12; Friday, May 13; and Saturday, May 14.

Contact: C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.

MEETINGS

CURRENT NATIONAL MEETINGS

SOCIETY OF TEACHERS OF FAMILY MEDICINE, Tenth Annual Spring Conference, Peachtree Plaza Hotel, Atlanta, May 2-4, 1977. Theme: Interactions in Family Medicine. Subtopics: interactions in patient education; teaching and consulting interactions of the interdisciplinary health care team; resident-patient interactive skills; family interactions; interactions in community medicine. $50 fee for members; $75 for nonmembers. More than 500 expected to attend. Contact: Mary E. Neil, Director of Member Services, Society of Teachers of Family Medicine, 1740 W 92nd St, Kansas City, Mo 64114.

AMERICAN LUNG ASSOCIATION, 73rd Annual Meeting, San Francisco Hilton Hotel, San Francisco, May 15-18, 1977. Featuring special workshops for professional staff, seminars for board members, tours for accompanying persons, evening social events, postgraduate courses. 26 elective credit hours, American Academy of Family Physicians; 26 hours, Category 1, AMA Physician's Recognition Award. Program divided into community program sessions, scientific sessions, business meetings. Postgraduate courses on Theory and Application of Pulmonary Function Tests: A Course for Practicing Phyicians, May 14-15, attendance limited to 400; How to Write a Scientific Article, May 19-20, limited to 20 persons. Contact: 1740 Broadway, New York 10019.

AMERICAN COLLEGE OF LEGAL MEDICINE, 17th International Conference on Legal Medicine, Camelback Inn, Scottsdale, Ariz, May 12-14, 1977. Major emphasis on malpractice insurance, pros and cons of "going bare." Hospitals and insurance covered in series of short presentations including Self-Insurance for Hospitals, Re-Insurance, Claims and Loss Control, Comprehensive Patient Safety Programs. 14 hours, Category 1, AMA Physician's Recognition Award. Contact: 1340 N Astor St, Suite 2608, Chicago 60610.

For other courses and symposiums, see Continuing Education Courses, pp 46-49.

Calendar of Listings

■ Denotes Texas Meetings

MAY

■ AMERICAN MEDICAL STUDENT ASSOCIATION-UT MEDICAL BRANCH NATIONAL STUDENT RESEARCH FORUM, Galveston, Tex, May 4-7, 1977. Room 209, Libbie Moody Thompson Basic Sciences Building, UT Medical Branch, Galveston, Tex 77550.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, San Antonio, Tex, May 19-22, 1977. Geraldine Midgley, Box 1287, Uvalde, Tex 78801.

ASSOCIATION FOR THE CARE OF CHILDEN IN HOSPITALS, Dearborn, Mich, May 25-28, 1977. Mary Frances Podolak, RN, Childrens Hospital of Michigan, 3901 Beaubien Blvd, Detroit, Mich 48201.

INDIANA CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, Indianapolis, May 11-14, 1977. David Gettle, MD, 10005 Hillsdale, Carmel, Ind 46032.

■ NORTH TEXAS CHAPTER, AMERICAN COLLEGE OF SURGEONS, Dallas, May 1977. Felix P Peppard, MD, FACS, Sec-Treas, 3600 Gaston, Dallas 75246.

SOCIETY OF TEACHERS OF FAMILY MEDICINE, Atlanta, May 2-4, 1977. 1740 W 92nd St, Kansas City, Mo 64114.

■ TEXAS AIR-MEDICS ASSOCIATION, Houston, May 12, 1977. CF Miller, MD, Box 1338, Waco, Tex 76703.

■ TEXAS DERMATOLOGICAL SOCIETY, Houston, May 14-15, 1977. William F Spiller, MD, Sec, 5000 Montrose, Houston 77006.

■ TEXAS DIABETES ASSOCIATION, Houston, May 13, 1977. Eric A Orzeck, MD, 7800 Fannin, Houston 77054.

■ **TEXAS MEDICAL ASSOCIATION, Annual Session, Houston, May 11-15, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.**

■ TEXAS OCCUPATIONAL MEDICAL ASSOCIATION, Houston, May 12, 1977. Frank J Kelly, MD, Box 647, Amarillo, Tex 79604.

■ TEXAS OPHTHALMOLOGICAL ASSOCIATION, Houston, May 1977. CA Struve, MD, Pres-elect, Box 6374, Corpus Christi, Tex 78411.

JUNE

AMERICAN MEDICAL ASSOCIATION, Annual Convention, San Francisco, Jun 18-23, 1977. James H Sammons, MD, Exec Vice-pres, 535 N Dearborn St, Chicago 60610.

INTERNATIONAL CONGRESS OF RHEUMATOLOGY, San Francisco, Jun 26-Jul 1, 1977. 9650 Rockville Pike, Bethesda, Md 20014.

NATIONAL FOUNDATION/MARCH OF DIMES, 1977 Birth Defects Conference, Memphis, Jun 8-10, 1977. Robert L Summitt, MD, Professor of Pediatrics, Anatomy and Child Development, University of Tennessee Center for the Health Sciences, 711 Jefferson, Memphis 38163.

■ NUECES COUNTY MEDICAL SOCIETY, Corpus Christi, Tex, Jun 2-3, 1977. John Paul Schulze, MD, Pres, Box 5280, Corpus Christi, Tex 78405.

ROCKY MOUNTAIN NEUROSURGICAL SOCIETY, INC, Lake Tahoe, Nev, Jun 8-12, 1977. Richard H Moiel, MD, Sec, 601 Medical Towers, 1709 Dryden St, Houston 77030.

■ **TEXAS HEART INSTITUTE, Houston, Jun 2-4, 1977. Mrs Verna Dewees, Sec to Medical Director, Box 20269, Houston 77025.**

JULY

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Mescalero, NM, Jul 18-21, 1977. Bob Reid, Convention Dir, Box 456, Sunland Park, NM 88063.

FLORIDA CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, 1977 Clinical Conference on Pre-Hospital Emergency Care, Orlando, Fla, Jul 8-10, 1977. Registrar, 600 Courtland St, Suite 420, Orlando, Fla 32804.

■ TEXAS RESEARCH INSTITUTE OF MENTAL SCIENCES, Sixth Annual Southwestern Partial Hospitalization Conference, Houston, Jul 29-30, 1977. c/o Kevin Roberts, PhD, Texas Research Institute of Mental Sciences, 1300 Moursund, Texas Medical Center, Houston 77030.

AUGUST

AMERICAN MEDICAL ASSOCIATION, Fifth Western Hemisphere Nutrition Congress, Quebec City, Canada, Aug 15-18, 1977. Department of Foods and Nutrition, AMA, 535 N Dearborn St, Chicago 60610.

ASPEN MUSHROOM CONFERENCE, Aspen, Colo, Aug 7-12, 1977. Aspen Mushroom Conference, c/o Beth Israel Hospital, 1601 Lowell Blvd, Denver 80204.

INTERNATIONAL CONFERENCE ON MEDICAL COMPUTING, Toronto, Aug 8-13, 1977. Department of Computer Systems in Medicine, American Medical Association, 535 N Dearborn St, Chicago 60611.

SEPTEMBER

AMERICAN ASSOCIATION OF ELECTROMYOGRAPHY AND ELECTRODIAGNOSIS, Salt Lake City, Sep 30-Oct 1, 1977. JL Melvin, MD, Sec-Treas, 10437 W Watertown Plank Rd, Box 7372, Milwaukee 53226.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Hot Springs, Va, Sep 8-10, 1977. GW Mitchell, Jr, MD, Sec, 171 Harrison Ave, Boston 02111.

AMERICAN ASSOCIATION FOR THE SURGERY OF TRAUMA, Detroit, Sep 15-17, 1977. JA Boswick, Jr, MD, Admn Officer, University of Colorado, 4200 E Ninth Ave, Denver 80220.

AMERICAN CANCER SOCIETY, NATIONAL CANCER INSTITUTE, National Conference on the Lymphomas and the Leukemias, New York, Sep 29-Oct 1, 1977. Sidney L Arje, MD, 777 Third Ave, New York 10017.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Hartford, Conn, Sep 10-11, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Lake of the Ozarks, Mo, Sep 16-18, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Chicago, Sep 24-25, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Hot Springs, Va, Sep 30-Oct 2, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Seminar on Negotiations, Bloomington, Minn, Sep 10-12, 1977. Department of Negotiations, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, Sep 27-Oct 1, 1977. Ms L Sablack, Exec Sec, 5272 River Rd, Suite 290, Bethesda, Md 20014.

AMERICAN ROENTGEN RAY SOCIETY, Boston, Sep 27-30, 1977. JF Martin, MD, Sec, 300 S Hawthorne Rd, Winston-Salem, NC 27103.

■ AMERICAN SOCIETY OF OPHTHALMOLOGIC AND OTOLARYNCOLOGIC ALLERGY, Dallas, Sep 30-Oct 1, 1977. WA Ward, MD, Sec-Treas, Bowman Gray School of Medicine, Winston-Salem, NC 27103.

■ TEXAS MEDICAL ASSOCIATION, Fall Conference, Austin, Tex, Sep 9-11, 1977. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.

OCTOBER

AMERICAN COLLECE OF CHEST PHYSICIANS, Las Vegas, Nev, Oct 30-Nov 3, 1977. 911 Busse Highway, Park Ridge, Ill 60068.

SOCIETY FOR CLINICAL AND EXPERIMENTAL HYPNOSIS, INC, Los Angeles, Oct 11-16, 1977. Mrs Marion Kenn, Admn Dir, 129A Kings Park Dr, Liverpool, NY 13088.

AMERICAN ACADEMY FOR CEREBRAL PALSY AND DEVELOPMENTAL MEDICINE, Atlanta, Oct 5-9, 1977. JE Bryan, Exec Sec, 1255 New Hampshire Ave, Washington, DC 20036.

■ AMERICAN ACADEMY OF CHILD PSYCHIATRY, Houston, Oct 19-21, 1977. VQ Bausch, Exec Dir, 1800 R St NW, Washington, DC 20009.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Las Vegas, Nev, Oct 10-13, 1977. R Tusken, Exec Dir, 1740 W 92nd St, Kansas City, Mo 64114.

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, Bal Harbour, Miami, Fla, Oct 30-Nov 4, 1977. CC Herold, Exec Dir, 30 N Michigan Ave, Suite 922, Chicago 60602.

AMERICAN ACADEMY OF PSYCHIATRY AND THE LAW, New Orleans, Oct 20-23, 1977. WD Weitzel, MD, Department of Psychiatry, College of Medicine, University of Kentucky, Lexington, Ky 40506.

AMERICAN ASSOCIATION OF PUBLIC HEALTH PHYSICIANS, Washington, DC, Oct 30-Nov 1, 1977. JV Sessums, Jr, MD, Sec-Treas, 1703 Ridgemont, Austin, Tex 78723.

AMERICAN ASSOCIATION FOR THE STUDY OF LIVER DISEASES, Chicago, Oct 31, 1977. MA Rothschild, MD, Sec-Treas, VA Hospital, First Ave at E 24th St, New York 10010.

AMERICAN CLINICAL AND CLIMATOLOGICAL ASSOCIATION, Colorado Springs, Colo, Oct 23-26, 1977. JE Wood, MD, Sec-Treas, Pennsylvania Hospital, Philadelphia 19107.

AMERICAN COLLECE OF CASTROENTEROLOCY, New Orleans, Oct 23-29, 1977. D Weiss, Exec Dir, 299 Broadway, New York 10007.

AMERICAN COLLEGE OF PREVENTIVE MEDICINE, Atlanta, Oct 30-31, 1977. W Bentley, Exec Dir, 801 Old Lancaster Rd, Bryn Mawr, Pa 19010.

■ AMERICAN COLLEGE OF SURCEONS, Dallas, Oct 17-21, 1977. CR Hanlon, Dir, 55 E Erie St, Chicago 60611.

■ AMERICAN CROUP PRACTICE ASSOCIATION, Houston, Oct 5-8, 1977. WG Davis, MD, Exec Vice-pres, 20 S Quaker Lane, Box 949, Alexandria, Va 22313.

■ AMERICAN INSTITUTE OF ULTRASOUND IN MEDICINE, Dallas, Oct 29-Nov 4. D LaMaster, Mng Editor, Box 25606, Oklahoma City 73125.

AMA RECIONAL MEETINC, Huron, Ohio, Oct 7-9, 1977. AMA, Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMA REGIONAL MEETINC, Honolulu, Oct 30-Nov 3 1977. AMA, Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMA SEMINAR ON NECOTIATIONS, Atlanta, Oct 15-17, 1977. AMA, Department of Negotiations, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, October 1977. L Sablack, Exec Sec, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN PHYSIOLOCICAL SOCIETY, St Louis, Oct 22-27, 1977. OE Reynolds, PhD, Exec Sec-Treas, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SCHOOL HEALTH ASSOCIATION, Atlanta, Oct 13-16, 1977. SJ Jerrick, Exec Dir, Box 708, ASHA National Office Bldg, Kent, Ohio 44240.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, New Orleans, Oct 15-19, 1977. JW Andes, Exec Sec, 515 Busse Highway, Park Ridge, Ill 60068.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, Atlanta, Oct 17-23, 1977. WF Hoffman, Jr, Exec Dir, 2400 E Devon Ave, Suite 218, Des Plaines, Ill 60018.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Las Vegas, Nev, Oct 20-28, 1977. DL Cilcrest, Exec Dir, 2100 W Harrison St, Chicago 60612.

AMERICAN SOCIETY OF MAXILLOFACIAL SURGEONS, San Francisco, Oct 30-Nov 4, 1977. CA Janda, MD, DDS, Sec, 120 Oakbrook Center Mall, Westchester, Ill 60153.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS, Memphis, Oct 12-15, 1977. FK Woolley, Exec Dir, 2625 Butterfield Rd, Oak Brook, Ill 60521.

CENTRAL ASSOCIATION OF OBSTETRICIANS AND CYNECOLOGISTS, Biloxi, Miss, Oct 6-8, 1977. DC Anderson, MD, Sec-Treas, Women's Hospital, University of Michigan Medical Center, Ann Arbor, Mich 48109.

■ MEDICAL CROUP MANACEMENT ASSOCIATION, Houston, Oct 9-14, 1977. RV Crant, PhD, Exec Dir, 4101 E Lousiana Ave, Denver 80222.

TEXAS MEDICAL ASSOCIATION
110TH ANNUAL SESSION
MAY 12-15, 1977 HOUSTON

TECHNICAL EXHIBITORS

The following firms will participate in TMA's 110th annual meeting. Their exhibits will be displayed in the Grand Ballroom and Hall of Exhibits of the Shamrock Hilton Hotel.

Representatives from these pharmaceutical companies, business equipment firms, insurance and investment companies, and other related fields will be on hand to discuss equipment, services, and products with you. The exhibitors add an important element to the educational aspects as well as financial support of TMA's annual meeting. Make plans now to spend time with the exhibitors. It will be time well spent.

Abbott Laboratories, North Chicago
The Acratod Company, Houston
Alpha Aviation, Inc., Dallas
Americana Corporation, New York
American Health Care Products, Dallas
American Medicorp, Inc., San Antonio
American Physicians Insurance Exchange, Dallas
Amigo Sales Company, Bridgeport, Mich.
Astro Comfort Stores, Phoenix
A-V Scientific Aids, Inc., Los Angeles
Ayerst Laboratories, New York

Blue Cross-Blue Shield of Texas, Dallas
Boehringer Ingelheim Ltd., Elmsford, N.Y.
Borden, Inc., Houston
Bristol Laboratories, Syracuse, N.Y.
The Brown Schools, Austin
Burroughs Wellcome Company, Research Triangle Park, N.C.

Carnrick Laboratories, Cedar Knolls, N.J.
Ciba Pharmaceutical Co., Summit, N.J.
Clark National Products, Inc., San Dimas, Calif.
Coherent Medical, Palo Alto, Calif.
Comatic Laboratories, Houston
Compu-Center, Inc., Corpus Christi
Control-O-Fax, Waterloo, Iowa
Cooper Laboratories, Inc., Wayne, N.J.
Coreco Research Corp., New York
Cornish Medical Products Company, Arlington

Data Assistant Corporation, Houston
Davenport X-Ray Company, Dallas
Dow Corning Corporation, Midland, Mich.

Electropedic Products, North Hollywood
Eli Lilly & Company, Indianapolis
Encyclopaedia Britannica, Inc., Chicago

Frigitronics, Inc., Shelton, Conn.

Geigy Pharmaceuticals, Ardsley, N.Y.
Gerber Products Company, Fremont, Mich.
Russell Grace Insurance, Fort Worth
Gyne-Tech Instrument Corp., Burbank

Hoechst-Roussel Pharmaceuticals, Inc., Somerville, N.J.
Hospital Affiliates International, Inc., Nashville
Hycel, Inc., Houston

Insurance Corporation of America, Houston
International Medical Electronics Ltd., Kansas City, Mo.
INTRAV, St. Louis
Ives Laboratories, Inc., New York

Jobst Institute, Inc., Toledo
Johnson & Johnson Dermatological Division, New Brunswick, N.J.

Kinetic Concepts, Inc., San Antonio
Kremers-Urban Co., Milwaukee

Landry Pharmaceuticals, Inc., Houston
Lederle Laboratories, Pearl River, N.Y.
Michael R. Lewis Co., Dallas
Living Interiors of Dallas

Mallinckrodt, Inc., Hazelwood, Mo.
Marion Laboratories, Inc., Kansas City, Kan.
May Laminating Co., Inc., Houston
M.D. Video Systems, Inc., Palm Springs, Calif.
Medex Division, Medical Personnel Service, Inc., Houston
Medical Plastics Laboratory, Inc., Gatesville
The Medical Protective Company, Fort Wayne, Ind.
MEDICOMP, Medical Computer Service, Houston
Medi-Signal Systems Co., Orange, Calif.
Merck Sharp & Dohme, West Point, Pa.
Metro Med Inc., Houston
Meyer Laboratories, Inc., Fort Lauderdale
Mission Pharmacal Company, San Antonio

Niagara of Houston, Houston

Organon Pharmaceuticals, West Orange, N.J.
Ortho Pharmaceuticals, Raritan, N.J.

Parke, Davis & Company, Detroit
Pfizer Laboratories, New York
Phone-A-Gram System, Inc., San Francisco
Phone Ware Inc., La Jolla, Calif.
Physician's Idea, Ft. Worth
Pioneer Medical Systems, Inc., New Britain, Conn.
Wm. P. Poythress & Co., Richmond
T. Rowe Price Associates, Inc., Baltimore
Professional Office Services of Houston, Houston

Reed & Carnrick Pharmaceuticals, Kenilworth, N.J.
Regency Fine Art, San Antonio
A. H. Robins Company, Richmond
Roche Laboratories, Nutley, N.J.
Roerig Division, New York

Sandoz Pharmaceuticals, Hanover, N.J.
W. B. Saunders Company, Houston
Schering Corporation, Kenilworth, N.J.
Schick Hospital, Ft. Worth
Searle Laboratories, Chicago
Select Imports, Houston
Setac, Inc., Austin
Smith Kline & French Laboratories, Philadelphia
E. R. Squibb & Sons, Princeton, N.J.
Storz Instrument Company, St. Louis
Syntex Laboratories, Inc., Palo Alto, Calif.

Teledyne Water Pik, Ft. Collins, Colo.
Texas Bank & Trust Co., Jacksonville
Texas Book Sales, Spring
Texas Commerce Trust Co., Dallas
Texas General Automated Systems, Inc., Houston
Texas Hospital Supply, Dallas
Texas Medical Association Automobile Leasing Program, Houston-Dallas
Texas Medical Association Insurance Program, Austin
Texas Pharmacal Company, San Antonio
Twin AA Cutlery Co., Abilene, Kan.

University of Texas Press, Austin-London
The Upjohn Company, Kalamazoo
USV Laboratories, Tuckahoe, N.Y.

Vita Mix Corporation, Cleveland

Wallace Laboratories, Cranbury, N.J.
Wolfe Pecan Lands, Inc., Stephenville
Wyeth Laboratories, Philadelphia

Zimmer-Crawford Associates, Houston

20/150 H

20/100 EAR

20/70 ING IS

20/50 AS PRECIOUS

20/40 AS SIGHT HAV

20/30 YOU HAD YOUR HE

20/20 TESTED LATELY A SI

20/15 COMFORTABLE HEARING

20/10 INVESTMENT OF A FEW MIN

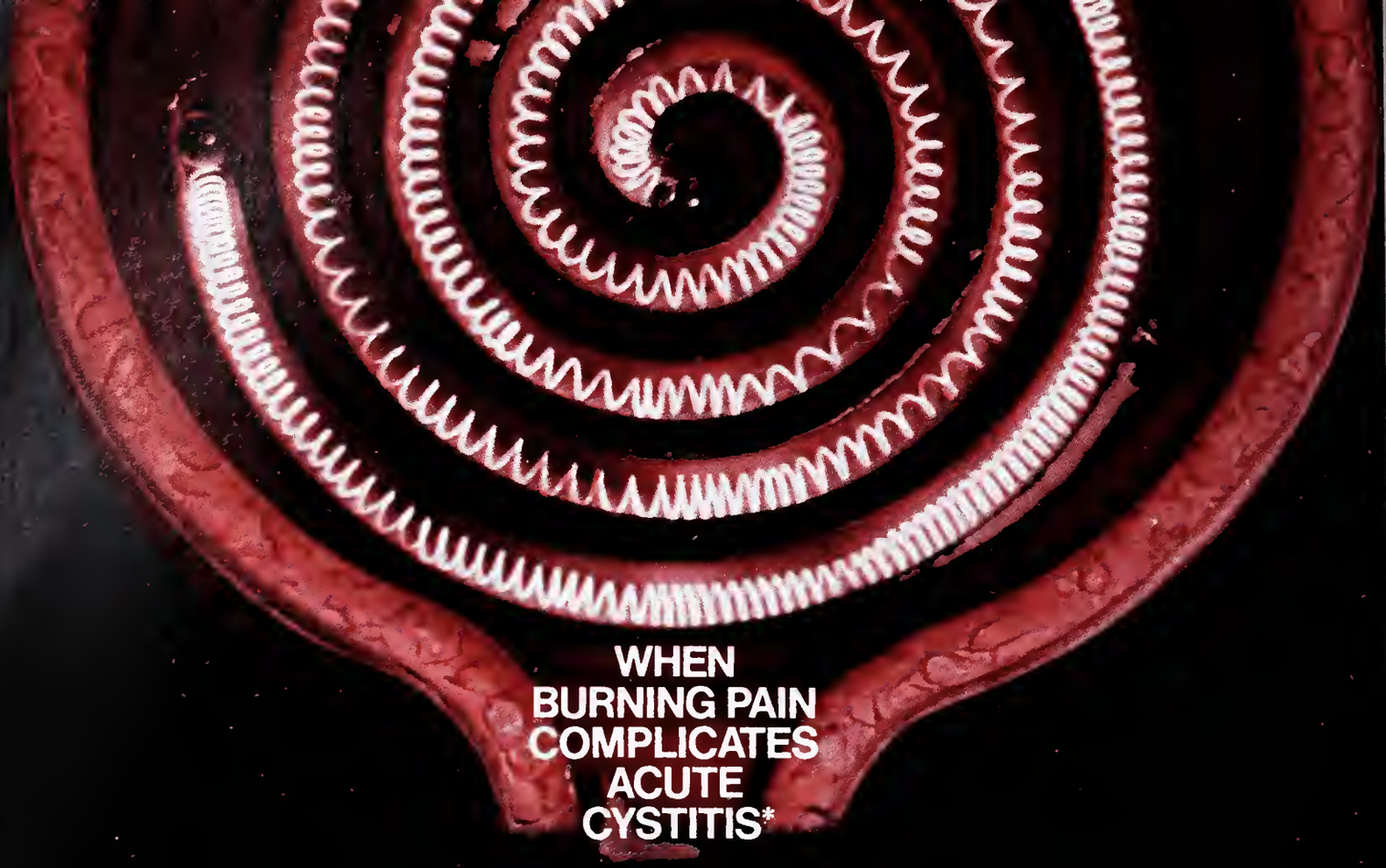
Hearing losses are among the most consistently neglected health problems. Many people with them won't even admit it to themselves, let alone others. A little encouragement may start them thinking about themselves more realistically.

That's why we're offering you the poster shown here. You can hang it on the wall or stand it on a small table. It comes with booklets called "As precious as sight" that give your patients some basic facts about auditory testing and hearing losses and how easy they are to correct in many cases.

Write to us for your free poster and booklets. They just might help you to help some patients who aren't hearing as well as they used to. Even those who ordinarily wouldn't hear of it.

Professional Relations Division, Beltone Electronics Corporation
4201 West Victoria Street, Chicago, Illinois 60646, an American company

Beltone
WHEN A HEARING AID WILL HELP



WHEN
BURNING PAIN
COMPLICATES
ACUTE
CYSTITIS*

TURN IT OFF WITH

AZO GANTANOL®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

FOR THE PAIN

- Quickly relieves painful symptoms such as burning and pain associated with urgency and frequency.
- Recommended antibacterial therapy: up to 3 days with Azo Gantanol, then 11 days with Gantanol (sulfamethoxazole)

FOR THE PATHOGENS

- Effectively controls susceptible pathogens such as *E coli*, *Klebsiella-Aerobacter*, *Staph. aureus*, *Proteus mirabilis* and, less frequently, *Proteus vulgaris*.

*nonobstructed due to susceptible organisms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis,* and, less frequently, *Proteus vulgaris)* in the absence of obstructive uropathy or foreign bodies.

Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contrain dicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

Warnings: Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *G I. reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Azo Gantanol is intended for the acute, painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

NOTE: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine.

Supplied: Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

DYAZIDE®

Trademark

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE FOR LONG-TERM CONTROL OF HYPERTENSION*

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

WARNING
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the fixed combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium-sparing action of its 'Dyrenium' component is warranted.

Contraindications: Further use in progressive renal or hepatic dysfunction; hyperkalemia. Preexisting elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs. Routine use of diuretics in otherwise healthy pregnancy.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in severely ill patients with urine volume less than one liter/day, the elderly or diabetics, with suspected or confirmed renal insufficiency. Periodic determinations of serum K^+ should be made. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **The presence of a widened QRS complex or arrhythmia in association with hyperkalemia requires prompt additional therapy.** Thiazides are reported to cross the placental barrier and appear in breast milk; fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and other adverse reactions that have occurred in the adult may result. When used in pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics, or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium® (triamterene, SK&F Co.), and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Do periodic blood studies in cirrhotics to check for nondrug-related variations in blood pictures, and in patients with folic acid depletion, since 'Dyrenium' may contribute to appearance of megaloblastosis. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

SK&F CO., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

BURROUGHS WELLCOME CO. MAKES CODEINE COMBINATION PRODUCTS.

YOU MAKE THE CHOICE.

EMPIRIN® COMPOUND c̄ CODEINE #3

Each tablet contains:
codeine phosphate, 32 mg (gr ½),
(Warning: May be habit-forming);
aspirin, 227 mg; phenacetin, 162 mg;
and caffeine, 32 mg.

C-III

EMPRACET™ c̄ CODEINE #3

Each tablet contains:
codeine phosphate, 30 mg (gr ½),
(Warning: May be habit-forming);
and acetaminophen 300 mg.

C-III

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

You may be eligible for more malpractice insurance for less money.

$400,000/$600,000 coverage for less than $300,000/$300,000*

Here's how simple it is. If you are a doctor with a good claims history, and can qualify for a $100,000/$300,000 policy from Insurance Corporation of America, then you can save thousands of dollars on malpractice insurance premiums and receive greater coverage. By obtaining ICA coverage first, you become eligible to secure $300,000/$300,000 excess coverage from the JUA at an 80% *savings* over primary rates. This 80% savings normally will more than offset the cost of the ICA policy.

HERE'S HOW IT WORKS!

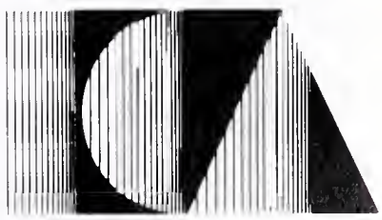
JUA	ICA/JUA PLAN
$300,000/$300,000 Annual Premium $16,320	$100,000/$300,000 – Premium, $8,577 $300,000/$300,000 – Premium, $3,250 Total Annual Premiums $11,827*

*Example based on Harris County Orthopedic Surgeon; similar savings available on most specialties

You save $4,493 with the ICA/JUA combination plan and get $300,000 additional insurance.

There's more to ICA than saving doctors money, but it is a good starting point. Contact your nearest ICA agent today for more information, or call us at (713) 526-4863.

Remember, at ICA we know your concern is practicing medicine, and our concern is protecting your practice.



INSURANCE CORPORATION OF AMERICA

Houston, Texas

A+AAAAA Reinsurance Protection provided by INA Reinsurance Corporation and the Great American Insurance Company.

CONTINUING EDUCATION COURSES

MAY

Texas Medical Association's Annual Session, May 11-15, 1977, in Houston, will offer physicians the opportunity to earn up to 32 hours Category 1 credit toward the AMA Physician's Recognition Award. Some of the courses available are listed here. More information on symposia, section meetings, and other continuing education activities being presented in conjunction with the Annual Session is available in the 1977 Texas Continuing Education Directory for Physicians and from Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701.

Adolescent's Medical Care

Title: Conference on School Health
Sponsor: Texas Medical Association, Austin
Location of Course: Holiday Inn Medical Center, Houston
Date: May 12, 1977
Duration: 9:15 am-4:15 pm; 4 total course hours
Fee: None
Designed For: General practitioners; Specialists; School administrators; Nurses
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Aerospace Medicine

Title: Scientific Program of the Texas Chapter of the Flying Physicians Association and the Texas Air-Medics Association
Sponsors: Flying Physicians' Association, Texas Chapter; Texas Air-Medics Association; Texas Medical Association, Austin
Location of Course: Holiday Inn Medical Center, Houston
Date: May 12, 1977
Duration: 9 am-5 pm; 5 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Allergy

Title: Section on Allergy
Sponsor: Texas Medical Association, Austin
Location of Course: Holiday Inn Medical Center, Houston
Date: May 13, 1977
Duration: Continuous; 10 am-5 pm; 5 total course hours
Fee: None
Designed For: Specialists in Allergy
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Anesthesiology

Title: Texas Society of Anesthesiologists Scientific Program
Sponsors: Texas Society of Anesthesiologists; Texas Medical Association, Austin
Location of Course: Shamrock Hilton Hotel, Houston
Date: May 14, 1977
Duration: Continuous; 8:15 am-4:30 pm; 6 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Arthritis & Rheumatism

Title: Texas Rheumatism Association Scientific Program
Sponsors: Texas Rheumatism Association; Texas Medical Association, Austin
Location of Course: Holiday Inn Medical Center, Houston
Date: May 14, 1977
Duration: 9 am-5 pm; 5 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Cardiovascular Disease

Title: Cardiovascular Disease—Diagnosis, Management of Acute Patient
Sponsors: American Medical Association; Texas Medical Association, Austin

Location of Course: Holiday Inn Medical Center, Houston
Date: May 15, 1977
Duration: 8 am-1 pm; 5 total course hours
Fee: $55
Designed For: General practitioners; Specialists in Cardiovascular Disease
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Chest Disease

Title: Section on Diseases of the Chest
Sponsors: Texas Medical Association, Austin; American College of Chest Physicians, Texas Chapter
Location of Course: Shamrock Hilton Hotel, Houston
Date: May 14, 1977
Duration: 10 am-4:30 pm; 6 total course hours
Fee: None
Designed For: Specialists in Chest Disease
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Dermatology

Title: Texas Dermatological Society Scientific Program
Sponsors: Texas Dermatological Society; Texas Medical Association, Austin
Location of Course: Texas Children's Hospital, Houston
Dates: May 14-15, 1977
Duration: 9 am-12 pm; 6 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel, clinical conference
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Title: Postgraduate Course on Office Dermatology
Sponsors: American Medical Association; Texas Medical Association, Austin
Location of Course: Holiday Inn Medical Center, Houston
Date: May 15, 1977
Duration: 8 am-1 pm; 5 total course hours
Fee: $55
Designed For: General practitioners; Specialists in Dermatology
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Emergency Care

Title: Symposium on Emergency Medical Services
Sponsors: Texas Medical Association, Austin; American College of Emergency Physicians, Texas Chapter; American Trauma Society, Texas Division
Location of Course: Shamrock Hilton Hotel, Houston
Date: May 12, 1977
Duration: 9 am-4:45 pm; 6 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, laboratory work, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Endocrinology

Title: Texas Diabetes Association Scientific Program
Sponsors: Texas Diabetes Association; Texas Medical Association, Austin
Location of Course: Holiday Inn Medical Center, Houston
Date: May 13, 1977
Duration: 8:15 am-5 pm; 6 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Family Medicine

Title: Texas Academy of Family Physicians Seminar
Sponsors: Texas Academy of Family Physicians; Texas Medical Association, Austin
Location of Course: Shamrock Hilton Hotel, Houston
Date: May 12, 1977
Duration: 9 am-5 pm; 6 total course hours
Fee: $20
Designed For: General practitioners; Specialists
Credit: AAFP Prescribed; Category 1,

AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Title: Section on Family Practice
Sponsor: Texas Medical Association, Austin
Location of Course: Shamrock Hilton Hotel, Houston
Date: May 13, 1977
Duration: 10 am-5 pm; 5 total course hours
Fee: None
Designed For: General practitioners
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Gastroenterology

Title: Section on Digestive Diseases
Sponsor: Texas Medical Association, Austin
Location of Course: Holiday Inn Medical Center, Houston
Dates: May 13-14, 1977
Duration: Continuous; 2:30-5 pm Friday; 8:15 am-12 pm Saturday; 6 total course hours
Fee: None
Designed For: Specialists in Gastroenterology
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Geriatrics

Title: Symposium on Aging
Sponsor: Texas Medical Association, Austin
Location of Course: Shamrock Hilton Hotel, Houston
Date: May 12, 1977
Duration: 2-5 pm; 3 total course hours
Fee: None
Designed For: General practitioners; Specialists in Geriatrics
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Internal Medicine

Title: Section on Internal Medicine
Sponsor: Texas Medical Association, Austin
Location of Course: Shamrock Hilton Hotel, Houston
Date: May 13, 1977
Duration: 8:15 am-5 pm; 6 total course hours
Fee: None
Designed For: Specialists in Internal Medicine
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

Neurology

Title: Section on Neurology
Sponsors: Texas Medical Association, Austin; Texas Neurological Society
Location of Course: Houston Marriott Hotel, Houston
Dates: May 12-13, 1977
Duration: 2:30-5 pm Thursday; 10 am-12 pm Friday; 5 total course hours
Fee: None
Designed For: Specialists in Neurology
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel
Contact: Mrs Dale Willimack, Director, Department of Annual Session, 1801 N Lamar Blvd, Austin 78701

JUNE

Basic Sciences: Microbiology & Immunology

Postponed: Clinical Immunodiagnosis, UT Health Science Center at San Antonio, originally scheduled for June 16-19, 1977

Cardiovascular Disease

Title: Texas Heart Institute Eighth Annual Symposium
Sponsor: Texas Heart Institute
Location of Course: Texas Children's Hospital, Houston
Dates: June 2-4, 1977
Duration: 4 hours Thursday; 8 hours Friday; 4 hours Saturday; 16 total course hours
Fee: $100
Designed For: General practitioners; Specialists
Enrollment: Maximum, 275
Credit: AAFP Elective
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel, seminar, television
Contact: Robert J. Hall, MD, Medical Director, Texas Heart Institute, Box 20269, Houston 77025

Title: Cardiology

Sponsors: American College of Cardiology; Baylor College of Medicine, Houston

Location of Course: Sheraton-Marina Inn, Corpus Christi
Dates: June 20-23, 1977
Duration: Continuous; 21 total course hours
Designed For: General practitioners; Specialists
Enrollment: Minimum, 50; Maximum, 250
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, workshops
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Gastroenterology

Title: Nutrition Course
Sponsors: Baylor College of Medicine, Houston; American College of Nutrition
Location of Course: Shamrock Hilton Hotel, Houston
Dates: June 9-10, 1977
Duration: Continuous; 2 days
Fee: To be announced
Designed For: General practitioners; Specialists in Internal Medicine, Pediatrics, Family Medicine
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Health Services

Title: Medical Practice and the Role of Health Education
Sponsor: UT Health Science Center at Houston
Date: June 24, 1977
Duration: 8 am-5 pm; 6-7 total course hours
Fee: To be announced
Designed For: General practitioners
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Internal Medicine

Title: Review of Internal Medicine
Sponsors: Baylor College of Medicine, Houston; American College of Physicians
Location of Course: Jesse H. Jones Library Building, Houston
Dates: June 2-4, 1977
Duration: Continuous; 6-7 hours per day beginning at 8 am; 18-20 total course hours
Fee: American College of Physicians members, residents, fellows, $100; Nonmembers, $150; Associates, $50
Designed For: General practitioners; Specialists
Enrollment: Minimum, 50; Maximum, 250
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Otolaryngology

Title: Head and Neck Reconstructive and Rehabilitation after Ablative Surgery
Sponsor: UT Medical Branch, Galveston
Location of Course: Holiday Inn, Galveston
Dates: June 3-4, 1977
Duration: 8 am-5 pm; 16 total course hours
Fee: $80
Designed For: General practitioners; Specialists
Enrollment: Minimum, 25; Maximum, 110
Teaching Methods: Audiovisual materials, clinical conference, lecture, open question, panel, seminar, television
Contact: NeKee McNulty, Assistant Director, Continuing Education Division, UT Medical Branch, Galveston 77550

Radiology and Radioisotopes

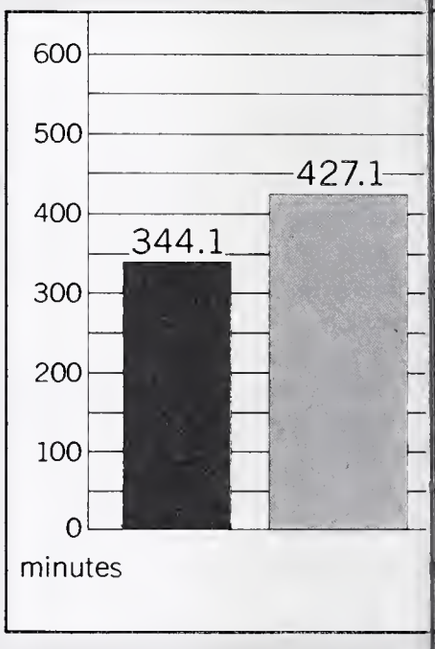
Title: Ultransonic Workshop
Sponsor: UT Health Science Center at Houston
Dates: June 9-10, 1977
Duration: 8 am-5 pm; 2 days; 12 total course hours
Fee: To be announced
Designed For: Specialists in Radiology
Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Psychiatry

Title: Second Annual International Field Studies on Psychiatry and Culture
Sponsors: Department of Phychiatry, UT Southwestern Medical School; A. Webb Roberts Center for Continuing Education, Dallas
Location of Course: Great Britain
Dates: June 11-26, 1977
Fee: $100 (travel expense paid separately)
Credit: 38 hours, AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Lecture, field trips
Contact: Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd, Dallas 75235

Proof of effectiveness in 6 elderly Texans with insomnia

Average increase in total sleep time: 83.0 minutes



Elderly insomniac patients slept appreciably longer, fell asleep faster, spent less time awa during the night[1]

Six elderly insomniac femal average age 74, received Dalma (flurazepam HCl) 15 mg for sev consecutive nights in the sleep research laboratory of a major u versity medical center in Texas. Every patient improved clinical in the two insomnia parameters shown above, and also spent les time awake after sleep onset. Th greater the degree of insomnia any patient experienced before Dalmane, the greater the impro ment with Dalmane. Efficacy w undiminished over the entire medication period.

erage decrease in sleep
ency: 30.3 minutes

almane (flurazepam HCl) relatively safe, even r patients on chronic arfarin therapy

Morning "hang-over" has been atively infrequent with Dalmane. e usual adult dosage is 30 mg *h.s.*; wever, in elderly and debilitated ients, start with 15 mg to help clude oversedation, dizziness or xia. Dalmane may be used in ients on chronic warfarin therapy; unacceptable fluctuation in othrombin time has been reported.[2,3]

Pretreatment

DALMANE
(flurazepam HCl)
15 mg

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

Usage in Pregnancy: **Several studies of minor tranquilizers (chlordiazepoxide, diazepam, and meprobamate) suggest increased risk of congenital malformations during the first trimester of pregnancy. Dalmane, a benzodiazepine, has not been studied adequately to determine whether it may be associated with such an increased risk. Because use of these drugs is rarely a matter of urgency, their use during this period should almost always be avoided. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, limit initial dosage to 15 mg to preclude oversedation, dizziness and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

References:
1. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
2. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
3. Robinson DS, Amidon EL: Interaction of benzodiazepines with warfarin in man, in *The Benzodiazepines*, edited by Garattini S, Mussini E, Randall LO. New York, Raven Press, 1973, p. 641

Objective proof offered by no other sleep medication

Dalmane® (flurazepam HCl) C-IV

One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.
One 30-mg capsule *h.s.* — usual adult dosage (15 mg may suffice in some patients).

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

American Medical Association presents

Three day seminars on negotiations

Learn about effective negotiations by attending one of these seminars designed for physicians and medical society personnel. This seminar will introduce and increase your understanding of the negotiating process and improve your negotiating ability and style.

June 4-5-6, 1977/ San Antonio, Texas

Negotiation--a necessary art in today's changing health care environm

Medical care is no longer a private matter between doctor and patient. Doctors must relate to government agencies, hospital boards and administrators, insurance carriers, peers, and consumer groups. Negotiating can bring meaningful resolutions to problems between medicine and these groups.

Negotiating is a skill that can be learned. AMA's intensive training seminars in the techniques, strategies, goals, and tactics which comprise the art of negotiating is designed especially for physicians and medical organization s members. Step by step, you'll learn all the rules, sec and techniques of skillful negotiating.

Only three of these highly-acclaimed seminars will be h in 1977 and one will be conveniently held in Texas. Re tration fee is $200 for AMA members or medical soc staff; $275 for nonmembers. For complete information registration forms, write AMA Department of Negotiatio 535 North Dearborn, Chicago 60610. Attendance is limit

WE'LL HANDLE YOUR KEOGH ACCOUNT FOR ONLY $10 A YEAR.

At Dallas Federal we can manage your Self-Employed Pension Plan (Keogh) for a very small fee, currently $10 a year. This administration fee is much higher at some institutions. Instead, the extra money they charge just to service your account could be earning interest with us.

What's more, as administrator, Dallas Federal assumes all present reporting obligations to the Department of Labor. You simply file the forms required by the Internal Revenue Service.

You don't already have a Keogh Plan? Here's how it works: If you're self-employed full or part time you can put up to 15% of your income earned from self-employment ($7,500 maximum each year) into Dallas Federal's Self-Employed Pension Plan. Your investment can earn a substantial amount over the year. Yet neither the principal nor the interest will be taxed until you withdraw it for retirement, when you may be in a lower tax bracket.

So save money with Dallas Federal's low service charge, while you save money with our high-earning retirement plan. Write us, come by our corporate headquarters, or call our Pension Plan Department at (214) 750-5224.

ANNUAL DEPOSIT	KEOGH $7,500
After 5 years	
Principal	$ 37,500
Interest	10,099
Balance	47,599
After 10 years	
Principal	$ 75,000
Interest	42,724
Balance	117,724
After 20 years	
Principal	$150,000
Interest	223,232
Balance	373,232

Pension Plan Supervisor
Dallas Federal Savings and Loan Association
P.O. Box 12709
Dallas, Texas 75225

Please send information on the Self-Employed Pension Plan (Keogh).

Name _____
Address _____
City _____ State ____ Zip _____
Day Telephone No. _____
Occupation _____

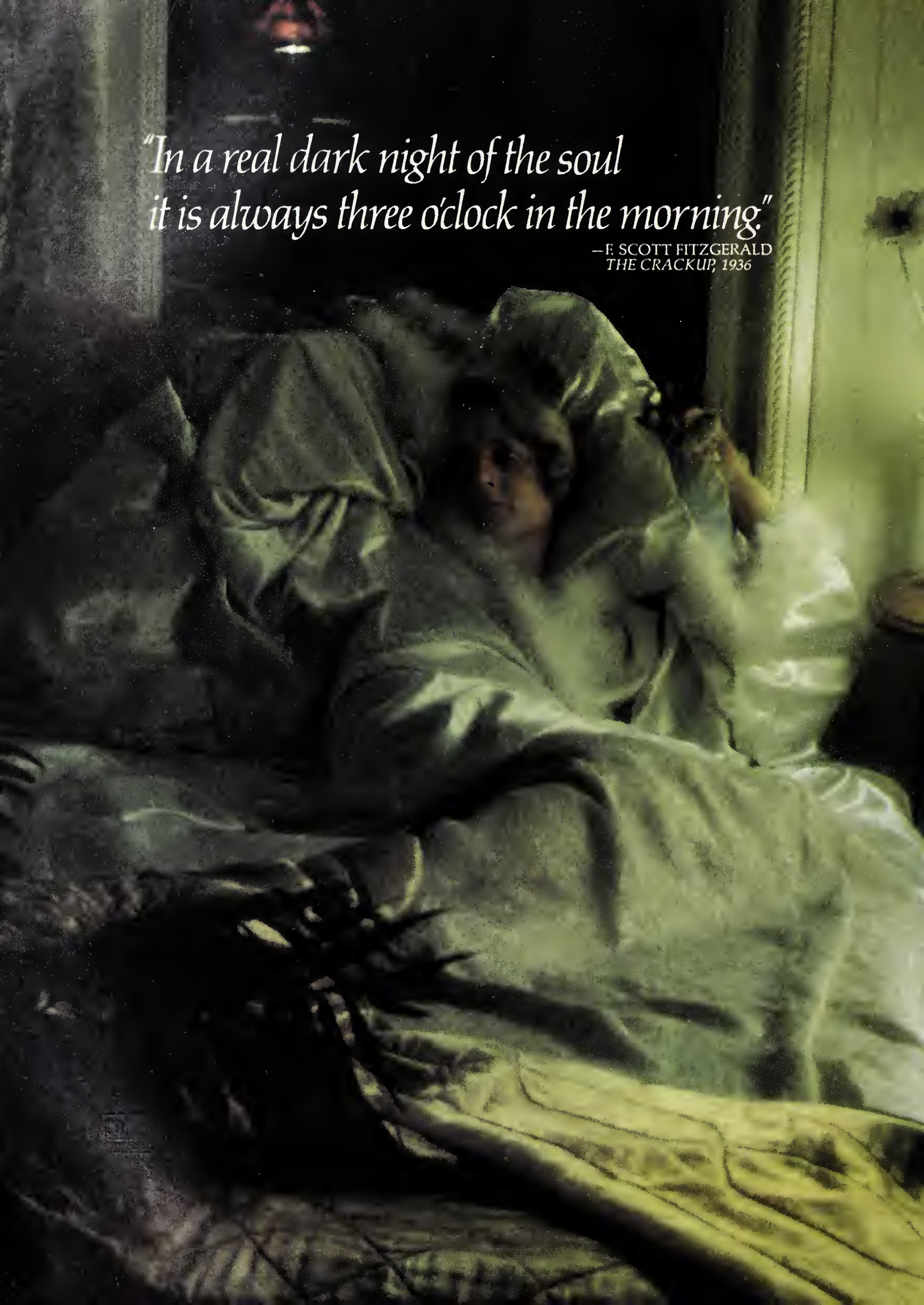
Chart based on a renewable 6- to 10-year Certificate of Deposit earning 7.75% interest a year, compounded daily, annual deposits made on the same day and month each year. Figures rounded off to nearest whole dollar. A substantial interest penalty is required for early withdrawal, except to pay plan benefits. Interest rate and terms stated here are subject to change at maturity.

Service charge for plans with 5 or more participants is only $25 a year.

Dallas Federal Savings
and Loan Association

Texas' largest Federal. Headquarters: Dallas Federal Savings Tower, 8333 Douglas Avenue, Dallas, Texas 75225.
Seventeen convenient Metroplex branches.

FSLIC


"In a real dark night of the soul
it is always three o'clock in the morning."
—F. SCOTT FITZGERALD
THE CRACKUP, 1936

Insomnia
a shade of blue that often accompanies depression

And, in anxiety/depression, Adapin® (doxepin HCl) often helps restore disturbed sleep patterns, such as early morning awakening, with a single daily dose at bedtime.[1] Adapin quickly relieves the patient's anxiety, gradually brightens his mood and outlook, with optimal antidepressant response usually evident within two to three weeks.

1. Goldberg HL, Finnerty RJ, Cole JO: Doxepin. Is a single daily dose enough? *Am J Psychiatry* 131:1027-1029, 1974.

Brief Summary of Prescribing Information
ADAPIN® (doxepin HCl) Capsules

Indications—Relief of symptoms of anxiety and depression.

Contraindications—Glaucoma, tendency toward urinary retention, or hypersensitivity to doxepin.

Warnings—Adapin has not been evaluated for safety in pregnancy. No evidence of harm to the animal fetus has been shown in reproductive studies. There are no data concerning secretion in human milk, or on effect in nursing infants.

Usage in children under 12 years of age is not recommended. MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with this drug, as serious side-effects and death have been reported with the concomitant use of certain drugs and MAO inhibitors.

In patients who may use alcohol excessively potentiation may increase the danger inherent in any suicide attempt or overdosage.

Precautions—Drowsiness may occur and patients should be cautioned against driving a motor vehicle or operating hazardous machinery. Since suicide is an inherent risk in depressed patients they should be closely supervised while receiving treatment. Although Adapin has shown effective tranquilizing activity, the possibility of activating or unmasking latent psychotic symptoms should be kept in mind.

Adverse Reactions—Dry mouth, blurred vision and constipation have been reported. Drowsiness has also been observed.

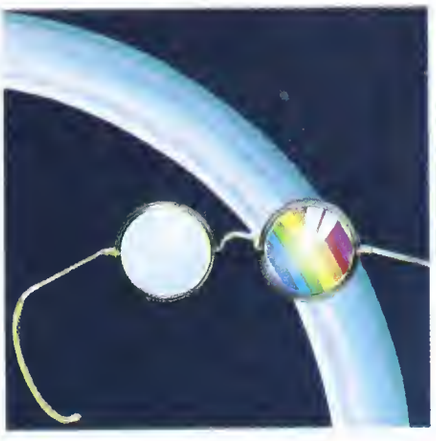
Adverse effects occurring infrequently include extrapyramidal symptoms, gastrointestinal reactions, secretory effects such as sweating, tachycardia and hypotension. Weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash and pruritus may also occur.

Dosage and Administration—In mild to moderate anxiety and/or depression: 10 mg to 25 mg t.i.d. Increase or decrease the dosage according to individual response. **Usual optimum daily dosage is 75 mg to 150 mg** per day, not to exceed 300 mg per day.

Antianxiety effect usually precedes the antidepressant effect by two or three weeks.

How Supplied—Each capsule contains doxepin, as the hydrochloride: 10 mg, 25 mg and 50 mg capsules in bottles of 100 and 1000.

For complete prescribing information please see package insert or PDR.



When they see life in shades of blue... help them see life in all its colors.

Adapin®
(doxepin HCl)

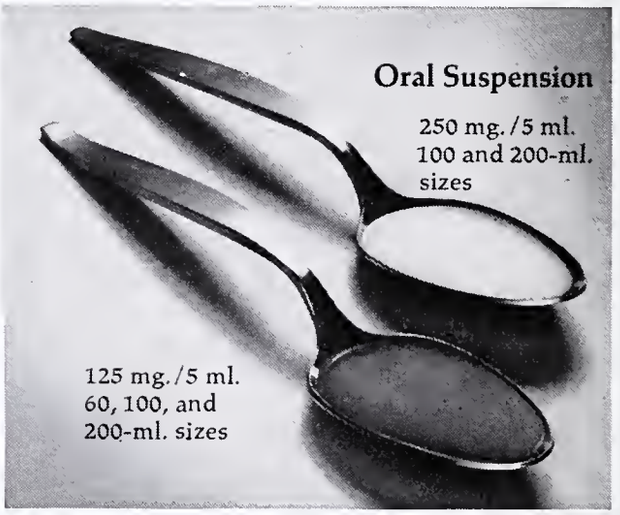
single daily dose recommended h.s.

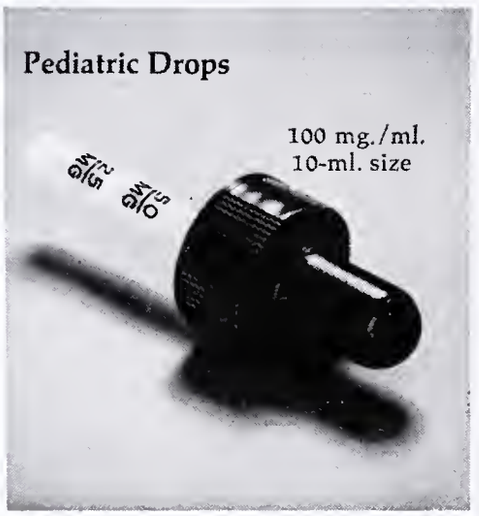
10-mg capsules
25-mg capsules
50-mg capsules

PENNWALT

Pennwalt Prescription Products
Pharmaceutical Division
Pennwalt Corporation
Rochester, New York 14603

easy to take





Keflex®
cephalexin

Lilly

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

S00738

Cancer chemotherapeutic agents

Charles E. Oswalt, MD; A. B. Cruz, Jr, MD

The cancer chemotherapeutic agents commonly in use today are presented. Many of the newer drugs are included. The characteristics, mechanism of action, dose and routes of administration, toxicities, and indications for use for each drug are discussed. The major impetus in oncological study presently is toward the use of many of these drugs in various combinations. Their effects together with other modalities of cancer treatment have increased tumor responses and remissions.

Introduction

The use of cancer chemotherapeutic agents is an area of increasing concern to surgeons as an adjunct to the surgical treatment of solid tumors. The steadily increasing number of chemotherapeutic agents available for use requires continued study to keep abreast of the most effective treatment programs for the 400,000 patients who develop disseminated or recurrent disease each year. Within the past decade, cures for choriocarcinoma, Wilms' tumor, and Burkitt's lymphoma have been developed, and the survival time in other malignancies has been significantly increased. This article presents the major cancer chemotherapeutic agents in use today and discusses each drug's mechanism of action, dose and route of administration, toxicities, and indications for use.

Cancer chemotherapy is based on an understanding of the cell cycle and the phase in which the agents act (Fig 1). Phase G_1 (18 hours) occurs before DNA synthesis. Phase S (20 hours) includes DNA synthesis. Phase G_2 (3 hours) consists of protein and RNA synthesis, and the short M phase is mitosis. The alkylating agents are cell cycle-nonspecific, acting on any phase. The antimetabolites act on Phase S, and the *Vinca* alkaloids attack Phases G_2 and M.

The systematic study of agents useful in treating neoplastic diseases developed during World War I when the leukopenic effect of mustard gas was observed and the less toxic nitrogen mustard was introduced. The development of the folic acid analogs grew from the theory that compounds structurally related to folic acid could inhibit white cell production. The appearance of purine, pyrimidine, and amino acid antagonists followed soon thereafter.

Alkylating Agents

Nitrogen mustard was the first antineoplastic agent used, and the other alkylating agents came from modifications of its basic chemical structure. After Krumbhaar and Krumbhaar described the leukopenic action of sulfur mustard in 1919, Gilman, Goodman, and Dougherty studied the effect of nitrogen mustard on transplanted lymphosarcoma in mice. They treated the first patient in 1942 in collaboration with Lindskog.[4]

The alkylating agents act by alkylating DNA, probably principally at guanine, blocking the progression of cells at the premitotic stage and causing interphase and mitotic death.[4]

The hematopoietic system (particularly the lymphocytes) is very susceptible to the effects of the alkylating agents. Other rapidly multiplying cells in the body, for example, intestinal mucosa and hair follicles, are also sites of preferential toxicity.[4]

Nitrogen Mustard (Mechlorethamine, Mustargen, HN^2)

Nitrogen mustard in clinical use is given intravenously because of severe local reac-

tions secondary to its powerful vesicant action. It undergoes almost immediate chemical transformation, no longer being present in the active form after a few minutes. The usual dosage is 0.4 mg/kg as a single dose, with a repeat dose only after bone marrow function has returned. If this dosage is not tolerated, 0.1 mg/kg may be given daily for four days. It may also be instilled intrapleurally (0.12-0.4 mg/kg) to control malignant effusions; this form of treatment is extremely painful.

The beneficial results of nitrogen mustard in treating the lymphomas, especially Hodgkin's disease, are widely accepted. Variable responses of chronic leukemias; carcinomas of the lung, ovary, breast, and nasopharynx, and seminoma have been reported.

Emesis after injection usually lasts for several hours, with nausea and anorexia continuing for about 24 hours. This side effect can be reduced by giving the drug at night along with a short-acting barbiturate and an antiemetic agent. The most serious toxic effect is the severe suppression of bone marrow function. Other minor problems are skin eruptions, herpes zoster, menstrual irregularities, and thrombophlebitis.[4]

Cyclophosphamide (Cytoxan)

Cytoxan was developed from nitrogen mustard in 1958 to achieve greater selectivity for neoplastic tissues. It causes less gastrointestinal upset and less damage to the megakaryocytes. It has no vesicant properties.

Cyclophosphamide can be given orally or intravenously, and is activated in the liver.[6] It is given in daily doses of 50-200 mg or in intermittent intravenous doses of 1.0 gm/sq m every three weeks.

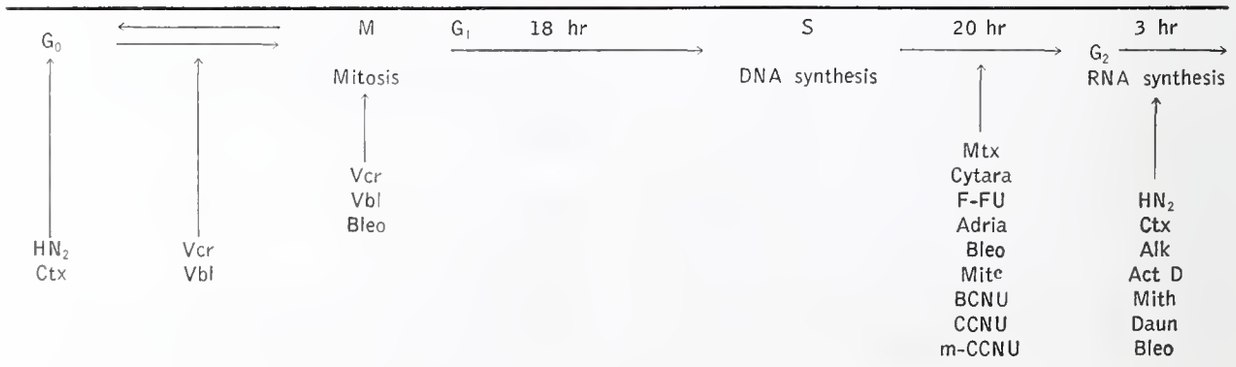
Cytoxan has induced sustained remissions in Hodgkin's disease, lymphosarcoma, Burkitt's lymphoma, and acute lymphoblastic leukemia.[4] It is also useful in chronic lymphocytic leukemias; neuroblastoma; and carcinoma of the breast, lung (especially oat cell), and ovary.[10]

Hemorrhagic cystitis commonly seen after administration is caused by the excretion of active metabolites and can be averted by keeping the patient well hydrated. Alopecia is a common side effect which is usually reversible. Mucosal ulcerations, dizziness, ridging of the nails, increased skin pigmentation, and hepatic toxicity have been reported. After long-term use, testicular atrophy and sterility in males and amenorrhea and ovarian fibrosis in females has been detected.[6] A temporary antidiuretic action has also been attributed to active metabolites.

Melphalan (Phenylalanine Mustard, Alkeran, L PAM)

Melphalan, a phenylalanine derivative of nitrogen mustard, is also known as L-sarcolysin. It is equally effective orally

1. Mitotic cycle—sites of drug action.



or intravenously, remaining active in the blood for about six hours. The drug is excreted mostly by the kidneys. The usual dosage is 6 mg daily for two or three weeks. Alkeran has little toxicity other than bone marrow suppression. Multiple myeloma responds well to Alkeran, which is also useful in breast and ovarian carcinoma. It is also employed in isolated limb perfusion for malignant melanoma.

Chlorambucil (Leukeran) is another nitrogen mustard used occasionally in treating chronic lymphocytic leukemia; lymphocytic lymphoma; and carcinoma of the breast, ovary, and testicle.

Antimetabolites

Folic Acid Analogs

Methotrexate (Mtx)

Methotrexate (Mtx) is the only folic acid analog in common use today. It produced the first striking remission in leukemia in 1948 and has since provided a cure for choriocarcinoma. It is a potent inhibitor of dihydrofolate reductase, the enzyme which converts dihydrofolate to tetrahydrofolate, which is required for thymidylate and purine synthesis. In humans, thymidylate biosynthesis is the more sensitive reaction.[5] Folinic acid administration ("Leucovorin rescue") is used to minimize the myelosuppressive effects of methotrexate in high-dose infusions.

Clinical resistance to methotrexate has been an obstacle to its success. Two mechanisms of resistance have been suggested: an increase in dihydrofolate reductase activity and decreased ability to transport the drug.[5]

Methotrexate is readily absorbed from the gastrointestinal tract, about 50% bound by plasma proteins, and excreted largely by the kidneys. Recent reports suggest that protein binding can be reduced by giving aspirin. The dosage used commonly in clinical practice is 0.1 mg/kg orally, intravenously, or intramuscularly, once or twice weekly. Massive doses of 500-1,500 mg intravenously biweekly accompanied by Leucovorin, 25 mg four times a day for two days, have been used. Because it crosses the blood brain barrier poorly, methotrexate can be given intrathecally (0.2-0.4 mg/kg every two to seven days) to treat cerebral involvement with leukemia or choriocarcinoma. The drug is used to maintain remissions in patients with leukemia by administering 30 mg/sq m intramuscularly twice weekly.

Methotrexate is useful in the treatment of acute lymphoblastic leukemia; breast, testicular, and upper respiratory tract carcinomas; hydatidiform mole; chorioadenoma destruens; and osteosarcoma. It has induced permanent remissions in choriocarcinoma. Patients suffering from severe psoriasis have experienced striking improvement with the use of methotrexate.

Myelosuppression is the main toxic effect of methotrexate. Mucositis and diarrhea are frequent side effects; hemorrhagic enteritis may develop. Postnecrotic cirrhosis, alopecia, and dermatitis are other untoward effects.

Pyrimidine Analogs

5-Fluorouracil (5FU, Fluorouracil)

Fluorouracil was first synthesized in 1957 by Duschinsky, Pleven, and Heidelberger to attack the biosynthesis of thymine, the pyrimidine base unique to DNA. After metabolic activation, it inhibits thymidylate synthetase, which is involved in the production of thymidylic acid.

The drug is poorly absorbed after ingestion and is degraded in the liver. The recommended dose is 10-15 mg/kg given daily for four to five days, or on a weekly basis. The maximum daily dose is 1 gm. Direct arterial perfusion of tumors has been advocated and produces less systemic toxicity. 5-Fluorouracil can be applied topically to treat premalignant keratoses and basal cell carcinoma of the skin.

Carcinoma of the breast, gastrointestinal tract, ovary, cervix, urinary bladder, and oropharyngeal areas respond to 5-FU. The earliest side effects are usually nausea and anorexia, followed by stomatitis and diarrhea. These are warning signs to dis-

continue treatment, as the maximal effect is evident on the 9th to the 14th day. The major toxic effect is myelosuppression, manifested most frequently by leukopenia. Other side effects are alopecia, nail changes, dermatitis, and increased pigmentation.

Cytosine Arabinoside (Cytosan, Cytarabine)

The preliminary investigation of the antineoplastic activity in man of cytosine arabinoside was done in 1963 by Talley and Vaitkevicius.[4] It blocks the conversion of cytidine nucleotide to deoxycytidine nucleotide and also prevents the formation of DNA by inhibiting the incorporation of deoxycytidine triphosphate.[7] Not active orally, cytarabine given intravenously is removed from the blood within 20 minutes, metabolized in the liver, and excreted in the urine.

Optimal dosage schedules for cytarabine have not been well established, but either frequent "pulse" doses or prolonged infusion is required because of its S-phase specificity. A recommended pulse dosage schedule is 2 mg/kg daily for ten days, increasing to 4 mg/kg daily if no toxic or beneficial effects are noted. Continuous infusion of 0.5-1.0 mg/kg (or 30 mg/sq m) per day may be increased to 2 mg/kg if no toxic or therapeutic response is seen.

Cytosine arabinoside is indicated for the induction of remission in acute myeloblastic or myelomonocytic leukemia. Some beneficial results have been observed in Hodgkin's disease and other lymphomas. The drug is a potent myelosuppressive agent and also causes gastrointestinal disturbance, stomatitis, hepatic dysfunction, and local phlebitis.

Natural Products

Vinca Alkaloids

While investigating the alleged hypoglycemic activity of the periwinkle plant (*Vinca rosea*), a species of myrtle, Nobel and coworkers observed bone marrow suppression in rats and demonstrated activity of an alkaloidal fraction against an acute lymphocytic neoplasm in mice.[4] The exact mechanism of action of the *Vinca* alkaloids is not known. They both produce metaphase arrest but differ greatly in their antitumor spectra, potencies, and toxic effects. Because of the rapidity of action, hyperuricemia can occur and should be guarded against.

Vinblastine (Velban)

Vinblastine is given intravenously every one to two weeks in doses of 5-15 mg/sq m. Since being released in 1961 for use in Hodgkin's disease and methotrexate-resistant choriocarcinoma, it has shown beneficial effects on the other lymphomas; acute and chronic leukemias; neuroblastoma; and carcinoma of the breast, lung, oral cavity, testis, and bladder.[4]

Leukopenia is the most common toxic effect of vinblastine. The nadir of the leukopenia occurs four to ten days after a dose, with recovery usually within 7 to 14 days. The manifestations of neurologic toxicity seen commonly with vincristine can occur, but are usually limited to temporary mental depression. Gastrointestinal disturbances, phlebitis, and cellulitis with extravasation can occur.

Vincristine (Oncovin)

Weekly intravenous injections of 0.5-2 mg/sq m are usually used with vincristine. Maintenance therapy is continued as long as possible in adults, because withdrawal of therapy usually results in an exacerbation of the disease within three weeks. It is effective in Hodgkin's disease and other lymphomas and is not cross-resistant with vinblastine. Combined with steroids, the drug gives 90% remissions in acute lym-

phoblastic leukemias.[4] It is also beneficial in Wilms' tumor, neuroblastoma, rhabdomyosarcoma, and carcinoma of the male and female reproductive systems.

Neurotoxicity is the most common clinical toxicity, with peripheral neuropathy manifested by paresthesias, loss of deep tendon reflexes, ophthalmologic disturbances, and muscle weakness with foot drop. Autonomic neuropathy, manifested by severe, even obstructive, constipation may be prevented by the use of laxatives and stool softeners. Vincristine has remarkably little myelosuppressive activity, therefore may be considered for use in patients with pancytopenia. Reversible alopecia, rare with vinblastine, is seen in 20% of patients given vincristine.

Antibiotics

Dactinomycin (Actinomycin D, Cosmegen)

Actinomycin D is one of several antibiotic agents isolated from *Streptomyces*. On a molar basis, the actinomycins are the most potent antineoplastic agents available, though actinomycin D is the only one in common use.

Dactinomycin acts by complexing with guanine in the helical configuration of DNA and blocks the synthesis of RNA by DNA-dependent RNA-polymerase.[4] After intravenous injection, very little of the drug is still in the blood after two minutes; 50% is excreted in the bile unchanged and 10% in the urine.

A course of dactinomycin consists of five daily doses of 0.015 mg/kg/day every two to four weeks. Its use in Wilms' tumor, rhabdomyosarcoma in children, and methotrexate-resistant choriocarcinoma is the most beneficial. Some activity against neuroblastoma, Ewing's tumor, melanoma, and carcinoma of the breast and gastrointestinal tract has been demonstrated. Combined with chlorambucil and methotrexate, it is useful in testicular carcinoma. In solid tumors in children, it can be used in combination with vincristine and cyclophosphamide.[4]

Gastrointestinal disturbances and bone marrow suppression are the drug's most serious toxic manifestations. The peak hematopoietic effect is seen one to seven days after completion of therapy and is evidenced by thrombocytopenia primarily. Inflammation and ulceration of gastrointestinal mucosa is common, as is alopecia. Increased pigmentation, desquamation, and severe local irritation are also seen.

Mithramycin (Mithracin)

Isolated from *Streptomyces plicatus,* mithramycin is a potent antineoplastic agent which has the unique property of reducing hypercalcemia and hypercalciuria due to bony metastases in advanced malignancy. Its mechanism of action is similar to that of actinomycin D, except that its effects are related to the concentration of magnesium. The metal probably complexes with mithramycin before combining with quanine in DNA, thus inhibiting DNA-directed RNA synthesis. Its fate in the body is unknown.

For testicular tumors, the dose of mithramycin is 0.030-0.050 mg/kg/day for eight- to ten-day courses every month. For hypercalcemia, it is given intravenously over four to six hours in doses of 0.025/kg/day for three or four days, with additional courses given as needed to maintain appropriate blood levels of calcium. Mithramycin is used almost exclusively for inoperable malignant tumors of the testis, particularly embryonal cell carcinoma.

The most important form of toxicity of mithramycin is a bleeding syndrome which is first manifested by an episode of epistaxis. Although many abnormalities of blood coagulation factors have been reported, none are severe enough in themselves to explain the bleeding tendency. It is probably a combination of defects that produces the hemorrhagic diathesis. Other side effects include gastrointestinal disturbances and abnormal results of liver and kidney function tests. Depression of serum calcium, phosphorous, and potassium may occur and should be watched for.[9]

Adriamycin (Doxorubicin)

Adriamycin is an anthracycline antibiotic isolated from cultures of *Streptomyces*

peucetius var. caesius in Italy in 1967. It is very similar in structure to daunorubicin, but has a higher therapeutic index (1.25 vs 0.67).[3]

Although the mechanism of action of adriamycin has not been fully classified, binding to DNA has been clarified. The cytotoxic action of the drug is maximal during the S phase when DNA is being replicated.[6] It is rapidly taken up in cardiac, renal, and pulmonary tissue, and excreted slowly in the bile and urine.

Optimal dosage schedules still have not been determined. The present recommended dosage is 60 mg/sq m intravenously every three weeks. Other commonly used dosage schedules are 0.4-0.8 mg/kg weekly after an initial loading dose. Children tolerate higher dosages than adults; patients pretreated with other anticancer agents are more susceptible to toxic side effects. Adriamycin has a broad spectrum of activity, but is especially active against soft-tissue sarcomas, thyroid and breast carcinoma, and acute lymphoblastic and chronic leukemias. It is also useful in treating malignant lymphomas, neuroblastoma, osteosarcoma, Ewing's sarcoma, and chorioepithelioma of the uterus. The drug has little use in maintenance therapy, because tumor regression is usually short lived.[1]

Toxicity is usually manifested initially by stomatitis, followed rapidly by bone marrow suppression. Alopecia is almost certain to occur. Electrocardiographic changes such as tachycardia, depression of the S-T segment, and flattening or inversion of the T waves may be signs of cardiac toxicity, although they are not reliable warning signs of the acute, refractory cardiac failure which has been reported. Myocardial damage is much less likely to occur with a total dose of less than 550-600 mg/sq m. Other minor side effects include gastrointestinal disturbances and hyperpigmentation of nailbeds and dermal creases, especially in children.

Daunorubicin (Daunomycin, Rubidomycin)

Daunorubicin was isolated from *Streptomyces peucetius* in 1963 by Grein and associates, and is an anthracycline antibiotic closely related to adriamycin.[11] The drug acts by complexing with both strands of the DNA helix, preventing coiling and folding of the DNA and interfering with DNA-directed RNA synthesis. Its fate and route of excretion have not been fully elucidated.

There are various regimens for the intravenous dosage of daunomycin. Children tolerate the drug better than adults. They are commonly given 1 mg/kg daily for four to five days, and maintained on 1-2 mg/kg once or twice a week. Adults are given 0.8 mg/kg/day for four days, followed by an interruption of five to ten days. They can usually be maintained on a slowly increasing schedule from 0.5 mg/kg every two days to 1 mg/kg every three days until toxicity occurs.

Rapid remissions in acute lymphoblastic and myeloblastic leukemias have been induced by daunomycin, particularly in combination with vincristine and prednisone.[3] It has also shown some efficacy in the treatment of chronic leukemias, lymphomas, neuroblastoma, and rhabdomyosarcoma.

The most important toxic effect of daunomycin is hematopoietic suppression, which usually occurs at a total dose level of 8-10 mg/kg. The white blood cell count may fall precipitously in acute leukemia, especially if it is initially very high. After the leukocyte count is stable, the platelet count continues to drift slowly to a nadir at seven to ten days.

At the height of bone marrow suppression, children are likely to run a temperature of 38.3-39.4C (101-103F) and to continue it for five to seven days. Although many of the fevers are the result of infection, most cases have had no source established. A generalized maculopapular skin

eruption may occur with the "daunomycin fever."[11]

Daunomycin causes several local reactions if it extravasates. Gastrointestinal disturbances, alopecia, and mucositis in children also occur. Evidence of cardiotoxicity similar to that of adriamycin is manifested by tachycardia, arrhythmias, gallop rhythms, and occasionally by congestive failure. Cardiac toxicity seems to be especially common in patients receiving a total dose of more than 25 mg/kg.

Bleomycin (Blenoxane)

Umezawa reported the isolation of bleomycin from *Streptomyces verticillus* in 1966. Although the cellular pharmacology has not been well worked out, the drug's most important effect is the inhibition of the progression of cells through the premitotic (G^2) and mitotic (M) phases of the cell cycle. It also inhibits the incorporation of thymidine into DNA and induces single-stranded DNA scission.[2]

Bleomycin rapidly localizes in the lung, skin, and certain malignant tumors and is excreted in the urine.

The most commonly used dosage is 10-20 units/sq m (0.25-0.50 units/kg) intravenously or intramuscularly once or twice a week. The total dose administered should not exceed 300 units.

Bleomycin has shown efficacy in the treatment of squamous cell carcinomas of the head and neck, genitourinary tract, and skin. It is uniformly active against all lymphomas, though the duration of response is shorter than with other drugs. The drug is also useful in the treatment of testicular carcinoma, especially when combined with vincristine. Here again the response is short-lived.

The most dangerous toxic effect of bleomycin is the unpredictable, occasionally fatal, sudden development of pulmonary fibrosis. The first clinical manifestations are dyspnea, cough, and low-grade fever, with a bilateral basilar interstitial infiltrate on chest x-ray and diminished arterial oxygen content. Skin toxicity is the most common side effect, with mucositis, alopecia, and induration and erythema of the fingers and hands. Recrudescence of the skin lesions may occur with subsequent courses of methotrexate or BCNU.[6] Drug-induced hyperpyrexia and acute fulminant hypersensitivity reactions are also seen. There is virtually no bone marrow toxicity, a characteristic which gives this drug unique usefulness.

Mitomycin C (Mutamycin)

Mitomycin C is an antibiotic isolated from *Streptomyces caespitosus*. It acts by inhibiting the synthesis of DNA, though the exact site of attachment is unknown. There is a correlation between guanine and cytosine content and the degree of cross-linking. The drug is excreted in the urine.

The recommended dosage schedule is 0.05 mg/kg/day intravenously for five days, with another five-day course following a two-day interval. The entire regimen can be repeated in two to three weeks.

Mitomycin C is useful in treating squamous cell carcinoma of the head and neck, lungs, and cervix; adenocarcinoma of the gastrointestinal tract and breast; hepatic cell carcinoma; and malignant melanoma.

The most common toxicity of mitomycin C is bone marrow suppression, primarily leukopenia and thrombocytopenia. Mucositis, alopecia, and local reactions are also common. There may be some pulmonary toxicity, although it is not clear whether the reported cases were due to primary or metastatic processes.

Miscellaneous Agents

Nitrosoureas

Three nitrosoureas are in clinical use and are similar in antineoplastic activities; these are BCNU (1-3-bis [2-chloroethyl]-1-nitrosourea) (Carmustine), CCNU (1-[2-chloroethyl]-3-cyclohexyl-1-nitrosourea) (Lomustine) and methyl CCNU (1-[chloroethyl]-3-[4-methyl cyclohexl]-1-nitrosourea) (Semustine). They are a unique group because of their fast antitumor action but delayed myelosuppression. In addition, they are lipid-soluble and penetrate the blood-brain barrier.

2. Cancer chemotherapeutic agents.

Drug	Mechanism	Dose, Route	Use	Toxicity
ALKALATING AGENTS				
Nitrogen Mustard Mechlorethamine Mustargen HN_2	Alkylate DNA	0.4 mg/kg IV. Repeat when marrow recovers, or 0.1 mg/kg qd x 4	Lymphoma, especially Hodgkin's; leukemias; Ca lung, ovary, breast, nasopharynx; seminoma	Marrow suppression, GI upset, local reaction
Cyclophosphamide Cytoxan	Alkylate DNA	50-200 mg IV, po, daily; 1.0 gm/M^2 IV q 3 wk	Hodgkin's; lymphosarcoma; Burkitt's; acute lymphoblastic leukemia (ALL); chronic leukemias; neuroblastoma; Ca of breast, lung, especially oat cell, ovary	Hermorrhagic cystitis, alopecia, mucosal ulcers, gonadal & liver toxicity, skin pigmentation
Melphalan Phenylalanine Mustard	Alkylate DNA	35 mg/M^2 over 5 days q 5-6 wk IV, po	Multiple myeloma; Ca of breast & ovary, regional perfusion-melanoma	Marrow suppression
Alkeran		6 mg qd x 2-3 wk		
ANTIMETABOLITES				
Folic Acid Analogs				
Methotrexate Mtx	Inhibits dihydrofolate reductase, blocking nucleic acid and protein synthesis	0.1 mg/kg po, IV, IM, 1-2 x/wk; 500-1,500 mg IV w/Leucovorin rescue; maintenance, 30 mg/M^2 IM, 2 x/wk	ALL; Ca of breast, testis, upper respiratory tract; hydatidiform mole; chorioadenoma destruens; psoriasis Cure for choriocarcinoma	Myelosuppression, mucositis, postnecrotic cirrhosis, alopecia, dermatitis. May develop resistance
Pyrimidine Analogs				
5-Fluorouracil 5-FU Fluorouracil	Inhibits thymidylate synthetase, blocking DNA synthesis	10-15 mg/kg IV qd x 4-5 or q wk, direct arterial perfusion	Ca of breast, GI tract, ovary, cervix, urinary bladder, oropharynx	Myelosuppression, nausea, diarrhea, stomatitis, alopecia, pigmentation, nail changes
Cytosine Arabinoside Cytosan Cytarabine	Inhibits incorporation of deoxycytidine into DNA	2 mg/kg IV qd x 10; to 4 mg/kg qd if no toxicity or response	Acute myelocytic leukemia (AML); Hodgkin's; lymphomas	Myelosuppression, GI upset, stomatitis, hepatic dysfunction, phlebitis
NATURAL PRODUCTS				
Vinca Alkaloids				
Vinblastine Velban®	Not known; produces metaphase arrest	5-15 mg/M^2 IV q 1-2 wk	Hodgkin's; Mtx-resistant choriocarcinoma; lymphomas; leukemia; neuroblastoma; Ca of breast, lung, mouth, testis, bladder	Myelosuppression, mental depression, GI upset, local reaction
Vincristine Oncovin	Metaphase arrest	0.5-2 mg/M^2 IV q wk	Hodgkin's; lymphomas; ALL w/steroids; Wilms'; neuroblastoma; rhabdomyosarcoma; Ca of male & female reproductive system	Neurotoxicity, alopecia

Drug	Mechanism	Dose, Route	Use	Toxicity
ANTIBIOTICS				
Dactinomycin Actinomycin D	Blocks DNA-dependent RNA synthesis	0.015 mg/kg/day IV x 5 q 2-4 wk	Wilms'; rhabdomyosarcoma; Mtx-resistant choriocarcinoma; neuroblastoma; Ewing's; melanoma; Ca of breast & GI tract w/chlorambucil & Mtx; testis Ca w/vincristine & Cytoxan; solid tumors in children	GI upset, marrow suppression, mucositis, alopecia, pigmentation, local reaction
Mithramycin Mithracin	Blocks DNA-dependent RNA synthesis	0.025-0.050 mg/kg/day x 8-10 q mo For hypercalcemia, 0.025 mg/kg/day IV x 3-4	Inoperable testis tumors, especially embryonal cell; reducing hypercalciuria and calcemia secondary to malignant disease	Idiopathic bleeding syndrome; GI upset, abnormal liver & kidney function Watch Ca^{++}, K^{+} $PO_4^{=}$
Adriamycin Doxorubicin	Unknown	60 mg/M^2 IV q 3 wk; 0.4-0.8 mg/kg q wk	Sarcomas; Ca of thyroid, breast, ALL; chronic leukemias; lymphomas; neuroblastoma; Ewing's; chorioepithelioma; osteosarcoma	Stomatitis, marrow suppression, alopecia, cardiotoxicity, GI upset, pigmentation
Daunuorubicin Daunomycin Rubiodomycin	Blocks DNA-dependent RNA synthesis	Children: 1 mg/kg/day IV x 4-5, then 1-2 mg/kg/day 1-2 x/wk Adults: 0.8 mg/kg/day x 4, then 1 mg/kg q 3 days	ALL; acute myeloblastic leukemia w/prednisone & vincristine; chronic leukemia; lymphoma; neuroblastoma; rhabdomyosarcoma	Marrow suppression, febrile response, local reaction, GI upset, alopecia, mucositis, cardiac toxicity
Bleomycin Blenoxane	Blocks DNA synthesis, causes DNA scission	10-20 units/M^2 IV, IM 1-2 x/wk, total 300	Squamous Ca of head & neck, GI tract, skin; lymphomas; w/vincristine in testis tumor	Pulmonary fibrosis, mucositis, alopecia, induration of fingers, hypersensitivity reaction
Mitomycin C Mutamycin	Inhibits DNA synthesis	0.05 mg/kg/day IV x 5, repeat after 2 days; repeat course q 2-3 wk	Squamous Ca of head & neck, lung, cervix; adenocarcinoma of GI, breast; hepatoma; melanoma	Marrow suppression, mucositis, alopecia, local reaction
MISCELLANEOUS AGENTS				
Nitrosoureas				
BCNU Carmustine	Alkylate DNA; inhibit DNA synthesis & repair	100-200 mg/M^2 IV q 6 wk	Lymphomas, especially Hodgkin's; Ewing's; neuroblastoma; Ca of GI tract & bronchus; brain	Delayed marrow suppression, GI upset, liver dysfunction
CCNU Lomustine	Alkylate DNA; inhibit DNA synthesis & repair	130 mg/M^2 po q 6 wk	Same as BCNU plus melanoma	Delayed marrow suppression, GI upset, liver dysfunction
Methyl CCNU Semustine	Alkylate DNA; inhibit DNA synthesis & repair	150 mg/M^2 po q 6 wk	Same as CCNU	Delayed marrow suppression, GI upset, liver dysfunction
Dimethyltriazeno Imidazole Carboxamide				
DTIC Dacarbazine	Unknown	2-4.5 mg/kg IV qd x 10, repeat q 4 wk	Melanoma, Ca of lung	Marrow suppression, GI upset, alopecia
Procarbazine Methylhydrazine Matulane	Unknown	50-200 mg/M^2/day po x 10-14, repeat q mo; often in MOPP* regimen	Hodgkin's; lymphoma, Ca of lung; malignant melanoma	GI upset, myelosuppression, CNS depression

*MOPP: Methotrexate, Oncovin (Vincristine), procarbazine, prednisone

There appear to be several ways the nitrosoureas act. They probably function as alkylating agents, with BCNU being able to cross-link DNA. They may also inhibit nucleic acid synthesis and DNA repair. All of them are rapidly taken up by the tissue and metabolized, because the parent compounds have not been found in the plasma or urine.[8] The metabolites appear to be excreted in the urine and bile.

BCNU must be given intravenously, while the other two are well absorbed orally. BCNU is given in doses of 100-200 mg/sq m every six weeks. CCNU is given at the same interval, the optimum dose being 130 mg/sq m. The dose of methyl CCNU is 150 mg/sq m.

BCNU has proven highly effective in treating malignant lymphomas, particularly Hodgkin's disease, and is also efficacious in Ewing's sarcoma, neuroblastoma, bronchogenic and gastrointestinal carcinoma, and primary and metastatic brain tumors. In addition, CCNU and methyl CCNU are also effective against malignant melanoma.

The delayed bone marrow suppression seen with these drugs is unique and currently unexplained. It may be due to the gradual disappearance of metabolically active substances whose formation is prevented by the drug. The nadir of the myelosuppression occurs three to five weeks after a dose. Minor gastrointestinal disturbances and liver dysfunction are also associated with administration.

Dimethyltriazeno Imidazole Carboxamide (DTIC, Dacarbazine)

The exact mechanism of action of DTIC, which was developed by the National Cancer Institute, is unknown. It may be inhibition of DNA synthesis, alkylation, and/or interaction with sulfhydryl groups. The drug is excreted slowly in the urine. The optimum dosage of the drug is 2-4.5 mg/kg/day intravenously for ten days, with subsequent courses at four-week intervals.

Malignant melanoma responds to DTIC in over 20% of cases. Most responders have skin and node involvement, with fewer responses seen in patients with liver, central nervous system, or bone involvement.[12] It has also been used in carcinoma of the lung.

Hematopoietic suppression is the most significant toxic effect, manifested primarily by leukopenia and thrombocytopenia. Anorexia, nausea, and vomiting are usually seen after the drug is administered. These reactions can usually be palliated with phenobarbital or prochlorperazine, or both. Alopecia and facial flushing during administration have also been observed.

Procarbazine (Methylhydrazine, Matulane)

The antitumor effect of procarbazine was discovered in 1963 by Bollag while he was looking for a monamine oxidase inhibitor. Although the drug's exact mechanism of action is unknown, it may damage DNA through peroxide or formaldehyde formation.

Procarbazine is absorbed completely when given orally, readily equilibrated in the plasma and cerebrospinal fluid, metabolized, and excreted in the urine. Recommended oral dosage is 50-200 mg/sq m/day for 10 to 14 days each month. It can be given singly, but is often included in the "MOPP" regimen. Its greatest therapeutic effectiveness is in the treatment of Hodgkin's disease, although it has some effectiveness in lymphomas, lung carcinoma, and malignant melanoma.

Nausea and vomiting and myelosuppression are common toxic effects of procarbazine. CNS depression makes the concomitant use of CNS depressants inadvisable.

There are many chemotherapeutic drugs that are already in use and newer ones are presently being developed. While all of these agents can be and are being used singly, a major thrust of oncological re-

search is toward the use of various combinations of these drugs with resulting increase in tumor responses and remissions. Also, the use of chemotherapeutic agents singly or in combinations with other modalities—surgery and radiotherapy—is finding more and more acceptance because of increased effectiveness. The tremendous advances which have been made in this field is in keeping with the impetus in the field of oncology for cancer control.

References

1. Blum RH, Carter SK: Adriamycin. A new anticancer drug with significant clinical activity. Ann Intern Med 80:249-259, 1974.
2. Blum RH, Carter SK, Agre K: A clinical review of bleomycin—a new antineoplastic agent. Cancer 31:903-914, 1973.
3. Bonadonna G, Monfardini S, De Lena M, et al: Phase I and preliminary phase II evaluation of adriamycin. (NSC 123127) Cancer Res 30:2572-2582, 1970.
4. Calabresia P, Parks RE Jr: Alkylating agents, antimetabolites, hormones, and other antiproliferative agents. In: Goodman LS, Gilman A, Eds: The pharmacological basis of therapeutics. New York, MacMillan Co, 1970. pp 1348-1375.
5. Chabner BA, Myers CE, Coleman CN, et al: The clinical pharmacology of antineoplastic agents (first of two parts). N Engl J Med 292(21):1107-1113, 1975.
6. Chabner BA, Myers CE, Coleman CN, et al: The clinical pharmacology of antineoplastic agents (second of two parts). N Engl J Med 292(22):1159-1168, 1975.
7. Goth A: Medical pharmacology. St. Louis, CV Mosby, 1974.
8. Hansen HH, Selawry OS, Muggia FM, et al: Clinical studies with 1-(2-chloroethyl)-3-cyclohexyl-1-nitrosourea (NSC 79037). Cancer Res 31:223-227, 1971.
9. Perlia CP, Gubisch NJ, Wolter J, et al: Mithramycin treatment of hypercalcemia. Cancer 25:389-394, 1970.
10. Rubin PE: Clinical oncology. Rochester NY, University of Rochester, 1974.
11. Tan C, Tasaka H, Yu KP, et al: Daunomycin, an antitumor antibiotic, in the treatment of neoplastic disease. Clinical evaluation with special reference to childhood leukemia. Cancer 20:333-353, 1967.
12. Wagner DE, Ramirez G, Weiss AJ, et al: Combination phase I-II study of imidazole carboxamide (NSC 45388). Oncology 26:310-316, 1972.

Dr. Oswalt, Surgery Resident, Bexar County Hospital, 4502 Medical Drive, San Antonio, TX 78229.

Dr. Cruz, Professor of Surgery and Chief, Head and Neck and Surgical Oncology Services, The University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, TX 78284.

Reprint requests to Dr. Cruz.

Rationale and usefulness of heparinization: an overview

Robert L. Palmer, MD

The importance of venous thrombosis and thromboembolism has become evident during the past few years. Venous thromboembolism accounts for at least 50,000 hospital deaths yearly and for 300,000 hospitalizations yearly at a cost of approximately $750 million.[1] Pulmonary embolism has been reported[1] to be the most common nonsurgical cause of death in patients who have undergone major orthopedic surgery, it accounts for a large number of deaths in postpartum patients, and it appears to be a major cause of morbidity and death in many patients hospitalized because of various chronic diseases.

The magnitude of the microcirculation and, when compromised, its possible relationship to the pathogenesis of myriad diseases are well known to the physician. Whether or not derangement of the microcirculation due to thrombi contributes to the morbidity of diabetes, hypertension, glomerulonephritis, and the collagen-vascular disorders is speculative but microthrombi may play an important role in their pathophysiology.

The physician should also appreciate that occlusive thrombosis in the arterial circulation in contrast to venous thrombosis may develop from entirely different circumstances, thereby altering the considerations for treatment. Therefore, the debate continues concerning the role of heparin in occlusive arterial thrombosis leading to strokes and myocardial infarction.[2]

It is incorrect to assume that thrombus formation follows an orderly sequence such as platelet aggregation to coagulation factor cascade to fibrin-rich clot. Several processes may proceed simultaneously, including a simultaneous activity of the fibrinolytic system, so that clotting may be initiated and disrupted at many steps in the process. The end product, the fibrin clot, may be composed of varying quantities of platelets, leukocytes, erythrocytes, and coagulation factor by-products, intermixed or stratified. Because of variations in end product and the substrate specificities of heparin, prophylactic treatment with heparin may be effective in some instances but not in others.

Heparin is the agent of choice for the treatment of pulmonary embolism and venous thrombosis. Its use in microcirculation disturbances, except for disseminated intravascular coagulation, and in arterial thrombosis is less clear. Several recent large-scale studies[3-5] have shown that pulmonary embolism is largely preventable in high-risk hospitalized patients on both medical and surgical wards through prophylaxis with low-dose heparin therapy. Success has also been reported[6] with use of heparin self-injected subcutaneously by outpatients for treatment of thrombophlebitis; these patients otherwise would have required hospitalization.

At the heart of the issue is whether or not heparin provides protection against the development of pulmonary emboli in the postoperative patient. If the reports that heparin is highly effective can be accepted, its use in a low-dose regimen may become routine in the management of many hospitalized patients and mandatory in the majority of "high-risk" patients undergoing major surgical procedures. Fig 1 lists some current indications for heparin therapy.

Properties of Heparin

Heparin is a mixture of acid mucopolysaccharides of similar structure whose molecular weights range from 6,000 to 25,000 depending in part on the source (beef or hog). Because of heparin's strong electronegative charge, it will combine with a wide

variety of proteins including several clotting factors.[7]

Commercially available sodium heparin is derived from hog intestinal mucosa or beef lung. Its potency is determined by a biologic assay with an USP reference standard and is expressed as units of heparin activity. Heparin is supplied in concentrations ranging from 1,000 USP units/ml to 40,000 USP units/ml, but lack of good quality control and the insensitivity of the assay may permit variations in actual concentration from batch to batch. This contributes to the problem in regulating drug dosage in individual patients.

Mechanism of Heparin Action

Heparin inhibits the coagulation of blood, the formation of fibrin clots, and the stabilization of the fibrin clot once it has formed. Its biologic half-life in the body is 1.5 to 2 hours, depending on the frequency and route of administration, the quality of previously administered heparin, and renal function. A portion of the total daily dose is excreted through the kidneys. Some diffuses into extravascular spaces so that heparin's half-life increases with increasing doses.[8,9] The available data pertaining to urinary excretion of heparin are insufficient to permit calculation of renal clearance.

The rationale for the use of heparin in venous thromboembolism is based on its effect on the coagulation cascade and the fact that venous thrombus formation results from the activation of thromboplastin (in contrast to arterial thrombus formation which is probably due to platelet-vessel wall interaction; in this case the benefit of heparin therapy is less clear).

Because Factor X operates in both the intrinsic and extrinsic coagulation pathways, one of the major rate-limiting steps in the coagulation cascade appears to be in the conversion of Factor X to Factor X_a. Heparin plus antithrombin III neutralizes Factor X_a.[10] Neutralization of a factor early in the cascade, before amplification has occurred, requires less heparin for inhibition —for example, 1 unit of heparin inhibits 32 units of Factor X_a, indirectly preventing potential generation of 1,600 NIH units of thrombin.[4] Heparin also combines with antithrombin III to inhibit thrombin but larger amounts are required to block the system at this level because of the amplification that has occurred. One reason why low-dose heparin therapy is ineffective in preventing thromboembolism in patients with fractured neck of the femur is that tissue thromboplastin has already been released in amounts too great to be inhibited by heparin.

Heparin also complexes with fibrinogen and, as a result, much smaller amounts of fibrin monomer are formed for clotting. Effects on platelet adhesiveness and the inhibition of Factors IX, XI, XII, and XIII also have been demonstrated. Thus, heparin interferes with almost every step of the coagulation cascade.[11]

Heparin Administration and Dosage

The major adverse reaction to heparin is bleeding. The reported incidences of bleeding in heparinized patients vary from 8 to 30%.[12,13] Reasons for this variation in incidence include the route of administration

1. Indications for heparin therapy.

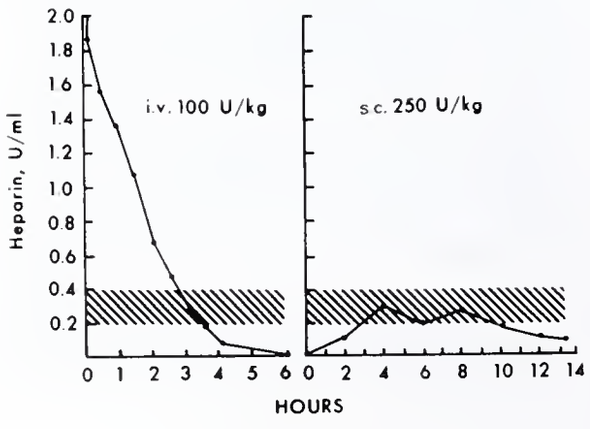
Pulmonary embolism
Deep venous thrombosis
Cerebral embolism
Arterial embolism
Disseminated intravascular coagulation
Major surgical procedures*

*Low-dose regimen

and dosage, complicating diseases, surgical competence, medications (including other anticoagulants and aspirin), and sensitivity of the methods used to determine bleeding. An increased incidence of bleeding is generally associated with bolus intravenous heparin therapy; continuous intravenous infusion results in lesser problems with bleeding. Few prospective trials relating to heparin administration have been published even though the drug has been used for 30 years.[12] An editorial in the *New England Journal of Medicine* in 1972[14] disclosed the astonishing fact that, until the report by Basu and associates,[13] no study had been done to show that monitoring heparin and controlling the dosage was of any value. However, selection of dosage still remains somewhat empiric.

My experience, like that of Penner and Hess,[8] suggests that a plasma concentration of heparin of approximately 0.3 U/ml is most effective and least likely to cause clinical bleeding problems. Heparin concentrations in excess of 0.5 to 0.6 U/ml, especially postoperatively, may result in bleeding.

2. Heparin levels in blood after intravenous (i.v.) and subcutaneous (s.c.) injections of a single dose of heparin at 100 U/kg (7,000 U) and 250 U/kg (18,000 U), respectively. Hatched region represents optimal therapeutic concentration. (Redrawn from Penner and Hess.[8])



Heparin therapy can be carried out in various ways; continuous intravenous infusion is the most satisfactory because it avoids the transient high levels of heparin found after bolus administration (Fig 2). Adequate nursing care and laboratory facilities must be available for proper monitoring of a continuous heparin infusion. Salzman and others[12] reported that bolus intravenous heparin injection, whether monitored or unmonitored, produced a sevenfold greater incidence of bleeding than did continuous intravenous administration monitored to produce a partial thromboplastin time of one and one-half to two times control levels. Heparin infusion is the method of choice for the postoperative patient who has venous thromboembolism.

The standard procedure is to give an initial dose of 5,000 U of sodium heparin intravenously as a single bolus and then, within one hour, to start a continuous intravenous infusion to deliver a total of 400 to 600 units of heparin per kilogram of body weight per 24 hours. In the patient who may bleed as a result of surgery within the previous 48 hours, the loading bolus dose is omitted and the infusion heparin dosage is started at 600 U/kg; the rate of the infusion is altered depending upon the thrombin clotting time results. Once the blood heparin concentration reaches equilibrium at the therapeutic level, small increases may cause exaggerated increases in the test results, especially if the partial thromboplastin time is used for monitoring. Because heparin may lose some of its activity in 5% glucose in water, 0.9% sodium chloride should be used when possible as the vehicle for the continuous drip.[15]

Concentrated heparin (20,000 to 40,000 U/ml) may be used for subcutaneous injections into the subcutaneous fat pad of the abdomen. Use of a 25-gauge needle

and dosages of 200 to 300 U/kg every 12 hours are recommended. Peak activity occurs in two to four hours, depending to a great part on the technique, with therapeutic levels persisting for approximately six hours (Fig 2).[8] The relatively constant rate of absorption makes this method a reasonable alternative when laboratory facilities and nursing coverage are inadequate.

For the average patient with thromboembolism, heparin coverage for seven to ten days is advised, followed by oral anticoagulant therapy. Warfarin, 7.5 to 10 mg/day, is ordinarily initiated during the final two days of heparin therapy with dosage adjustments afterward dependent on the Quick one-stage prothrombin time. With the high-risk patient, heparinization should be continued longer because it is more effective than orally administered anticoagulants. Depot preparations of heparin and intramuscular heparin injections should be avoided.

In the low-dose regimen, 5,000-U doses of regular heparin are injected subcutaneously at 8- or 12-hour intervals.[3] The initial dose should be given two hours preoperatively; if given earlier, an occasional patient may experience bleeding (Fig 2). It is advisable to begin the heparin treatment before operation because of the increased effectiveness of heparin early in the coagulation sequence.[4] Prophylaxis should be continued for seven or more days, depending on the nature of the operation and its complications.

Laboratory Control of Heparin Therapy

Development of reliable dosage schedules has been difficult because of the vagaries in laboratory control. No simple test is available. Heparin tolerance varies from person to person, depending on the disease state, coagulation potential, and concentrations of antithrombin III and platelet factor 4.[16]

The thrombin clotting time (TCT) test is relatively specific and simple to perform; the results are reported in units of heparin per milliliter of plasma.[16] Ordinarily, the TCT test is performed daily during the period of heparin infusion.

If the TCT test is not available, an alternative is the activated partial thromboplastin time (APTT) test. This is a useful test but it is highly sensitive to changes in heparin concentration at the higher therapeutic ranges: variations of a few tenths of a unit per milliliter of plasma may cause a two- to threefold increase in the test result. Therefore, if bolus heparin therapy is being monitored, a late dose or an early blood sampling may produce APTT test results in the 300-second range. Unfortunately, many different thromboplastin preparations are used in the APTT test and they differ in their sensitivity to heparin, so test results may vary from institution to institution. For dependable test results, the sample must be delivered to the laboratory without delay and the assay must be performed carefully. When the APTT test is used for monitoring purposes, the best clinical results will be obtained if the APTT value is two to three times normal in samples obtained either at random in the infusion schedule or one to two hours before the next bolus injection (two hours if on a six-hour schedule or one hour if on a four-hour schedule). Fig 2 shows the reason for timing the blood sampling correctly in reference to the injection in order to obtain meaningful data.

Comment

Thromboembolism is an immediate risk to life and a cause of serious late sequelae in

many medical and surgical patients. Prophylaxis, if effective, would appear warranted. The results of an international multicenter trial[3] indicate that minidose heparin therapy can be recommended for high-risk patients undergoing operation. In the postoperative patient, there may develop a hypercoagulable state that becomes a problem clinically due to facilitation of venous thrombosis if the rate of Factor X_a formation in its pivotal role is greater than the effectiveness of antithrombin III in neutralization. Heparin may lessen potential thrombogenesis by increasing inhibitor neutralization of Factor X_a. Once thrombin is formed, later in the clotting schema, inhibition is difficult, larger quantities of heparin are required, and clotting ordinarily occurs.

The rationale for use of heparin in deep vein thrombosis in much larger dosages is that heparin affects thrombin via antithrombin III and also inhibits conversion of fibrinogen to a firm fibrin clot. Therefore, it is hoped that the thrombus will not extend and embolize. But, again, the use of heparin is prophylactic because heparin has no effect upon the clot, once formed, only upon its propagation.

Unfortunately, there have been no prospective studies that have established the efficacy of heparin in treating deep vein thrombosis, and therefore there are no data on duration of treatment, methods of administration and monitoring, or appropriate dosage. The studies by Basu and associates[13] and Salzman and associates[12] come closest to answering some of these questions. On what evidence is available, I would advise a continuous intravenous infusion of heparin in some type of physiologic salt solution, preferably isotonic saline, for seven to ten days at a dosage of 400 to 600 U/kg per 24 hours monitored by the thrombin clotting time test. This is then replaced by a regimen of orally administered anticoagulant.

Summary

Because of the immediate risks and serious later sequelae of thromboembolism, effective prophylactic treatment is warranted. On the basis of evidence available, in the high-risk surgical patient, low-dose subcutaneous heparin is indicated; for the patient with venous thrombosis, continuous intravenous infusion of heparin for seven to ten days with monitoring by laboratory tests is advised. Fortunately, most patients on heparin therapy have no underlying hemostatic defect so that heparin therapy is relatively safe when given in varying doses, whether monitored or not.

References

1. Wessler S: Anticoagulant therapy-1974. JAMA 228:757-761, 1974.

2. Mustard JF: Platelets and thrombosis in acute myocardial infarction. Hospital Practice 7:115-128, 1972.

3. Kakkar VV, Corrigan TP, Fossard DP: Prevention of fatal postoperative pulmonary embolism by low doses of heparin. Lancet 2:45-51, 1975.

4. Kakkar VV: Low dose heparin in the prevention of venous thromboembolism. Rationale and results. Thromb Diath Haemorrh 33(1):81-96, 1975.

5. Hirsh J: Venous thromboembolism: diagnosis, treatment, prevention. Hospital Practice 10(8):53-62, 1975.

6. Clinical Trends in Cardiology 1976, pp 1-4.

7. Deykin D: The use of heparin. N Engl J Med 280: 937-938, 1969.

8. Penner JA, Hess RG: Heparin therapy in the 70's. University of Michigan Medical Center Journal 40:57-61, 1974.

9. Estes JW: Heparin therapy. Internal Medicine Digest 1971, pp 33-42.

10. Rosenberg RD: Coagulation-fibrinolytic mechanism and the action of heparin. Adv Exp Med Biol 52:217-237, 1975.

11. Dvilansky A, Britten AF, Loewy AG: Factor XIII assay by an isotope method. II. Heparin inhibition of factor XIII activation. Thrombosis Diath Haemorrh 24:256-264, 1970.

12. Salzman EW, Deykin D, Shapiro RM, et al: Management of heparin therapy: Controlled prospective trial. N Engl J Med 292(20):1046-1050, 1975.

13. Basu D, Gallus A, Hirsh J, et al: A prospective study of the value of monitoring heparin treatment with the activated partial thromboplastin time. N Engl J Med 287:324-327, 1972.

14. Deykin D: Regulation of heparin therapy. N Engl J Med 287:355-356, 1972.

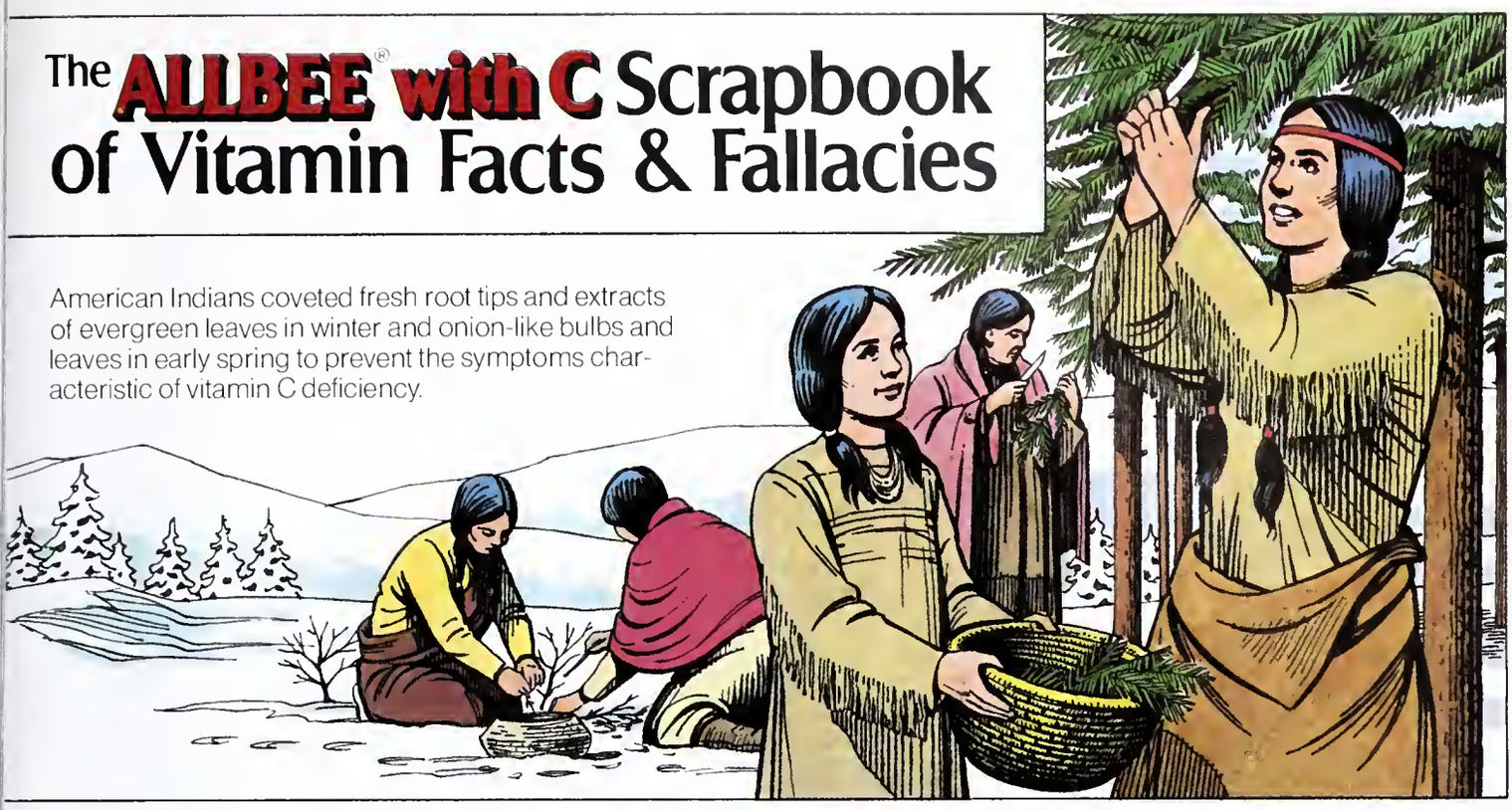
15. Jacobs J, Kletter D, Superstine E, et al: Intravenous infusions of heparin and penicillins. J Clin Pathol 26:742-746, 1973.

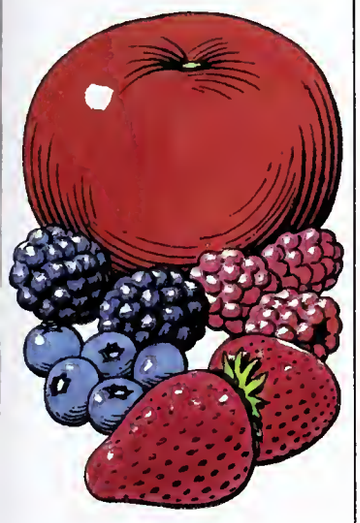
16. Penner JA: Experience with a thrombin clotting time assay for measuring heparin activity. Am J Clin Pathol 61:645-653, 1974.

Dr Palmer, Scott and White Clinic, Temple, TX 76501.

The ALLBEE® with C Scrapbook of Vitamin Facts & Fallacies

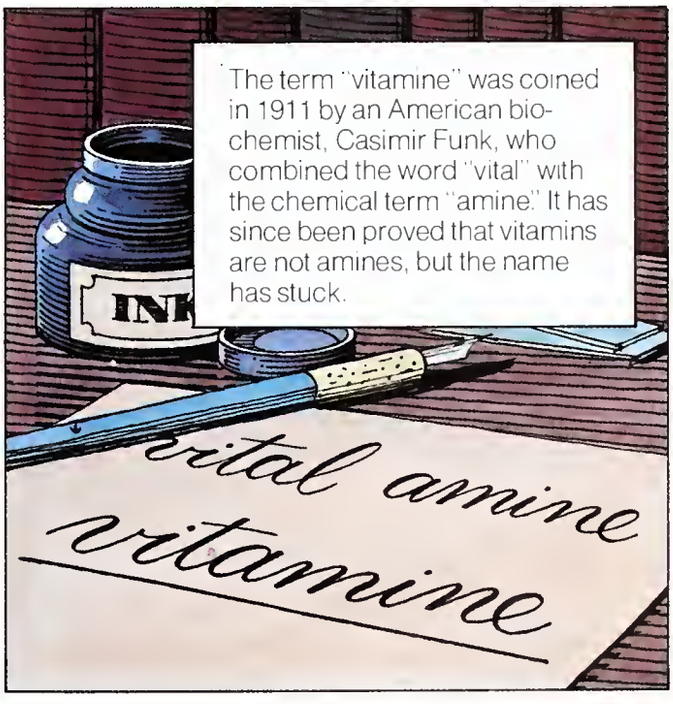
American Indians coveted fresh root tips and extracts of evergreen leaves in winter and onion-like bulbs and leaves in early spring to prevent the symptoms characteristic of vitamin C deficiency.





A tomato is botanically classified as a berry!

It is ironic that many of the vegetables highest in vitamin C and riboflavin are considered unappetizing by many people. These include turnip greens, kale, chard, mustard greens, spinach, water cress, broccoli and brussels sprouts.



The term "vitamine" was coined in 1911 by an American biochemist, Casimir Funk, who combined the word "vital" with the chemical term "amine." It has since been proved that vitamins are not amines, but the name has stuck.

At least 144 different quality assurance tests are run on the raw materials and manufacturing steps that go into Allbee® with C. The Monogram "AHR" on every capsule is your assurance that this is the original and genuine Allbee® with C and not an imitation.

Available on your prescription or recommendation

ALLBEE® with C

High Potency B-Complex and Vitamin C Formula

A.H. Robins Company, Richmond, Va. 23220 A·H·ROBINS

Spasm reactor?

Donnatal®!

	each tablet, capsule or 5 ml tsp of elixir (23% alcohol)	each Donnatal No. 2 Tablet
Phenobarbital (warning: may be habit forming)	(¼ gr) 16.2 mg	(½ gr) 32.4 mg
Hyoscyamine sulfate	0.1037 mg	0.1037 mg
Atropine sulfate	0.0194 mg	0.0194 mg
Hyoscine hydrobromide	0.0065 mg	0.0065 mg

Indications: Based on a review of this drug by the NAS/NRC and/or other information, FDA has classified the following indications as possibly effective: adjunctive therapy in the treatment of peptic ulcer; the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis. Final classification of the less-than-effective indications requires further investigation.

Brief summary. Contraindicated in patients with glaucoma, renal or hepatic disease, obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy) or a hypersensitivity to any of the ingredients. Blurred vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur at higher dosage levels, rarely at the usual dosage..

A·H·ROBINS A H Robins Company, Richmond, Virginia 23220

Benign liver tumors in patients taking oral contraceptives

William H. Turney, MD; Ross F. Shipp, MD; N. J. Bellegie, MD

An increased incidence of benign liver tumors in young women taking oral contraceptives has been suggested by several recent reports,[1-5] particularly in the British literature. These tumors have been variously described as benign hepatomas,[2] liver hamartomas,[1] and focal nodular hyperplasia.[3]

The following is a case report of a huge liver tumor in a young woman who was taking oral contraceptives. The tumor ruptured spontaneously, and massive hemoperitoneum necessitated ligating the common hepatic artery to achieve lifesaving hemostasis.

Case Report

The patient, a 30-year-old white woman, was in good health until shortly before admission, at which time she experienced sudden onset of nausea, vomiting, and severe epigastric pain radiating to the right subcostal area and back. On admission, her blood pressure was 106/80 mm Hg, but her pulse rate was 120 beats/minute and thready. Abnormal physical findings were limited to tenderness in the abdomen, especially in the epigastrium. Results of pelvic and rectal examinations were unremarkable. The hemoglobin value was 10.7 gm/100 ml, falling to 6.9 gm/100 ml in two hours. The white blood cell count increased from 10,500 to 22,000/cu mm during the same time. Roentgenograms of the abdomen were unremarkable.

Because the patient was thought to be bleeding intra-abdominally, she was taken to surgery. At laparotomy, a 15-20-cm tumor was found in the central portion of the left lobe of the liver and extending into the right lobe. There was a 12-15-cm, acutely bleeding rent in the anterior surface of the tumor. Conservative measures, including liver sutures and packing with Surgicel, did not control the bleeding. The lesion was thought to be nonresectable in view of its size and of the patient's condition. Accordingly, the common hepatic artery was ligated in its proximal portion as a lifesaving procedure. This controlled the bleeding rapidly and effectively.

Postoperatively, the patient had a clinically stable course, with her main problem being a low-grade fever. Values for liver function became moderately elevated (SGOT 150 units, normal 7-40; alkaline phosphatase 227 units, normal 30-85; bilirubin 1.6 mg/100 ml) in the first week postoperatively, but gradually returned to near normal levels. The patient was discharged from the hospital in good condition 2½ weeks after surgery. She has continued to do well and has returned to her job.

The patient had taken oral contraceptives (Ortho-Novum, 2 mg) for seven years before her illness. These have been discontinued.

Discussion

Primary benign tumors of the liver are rare lesions, almost unheard of until recently. In a review of all the benign liver tumors seen at the Mayo Clinic from 1907 to 1954, Hensen[6] found only four benign hepatomas and nine cholangioadenomas. Baum[2] reviewed the records of St. Joseph Mercy Hospital in Ann Arbor and found only three cases of benign liver tumors in noncirrhotic patients since 1913, and those three were recent. There have been increasing numbers of these tumors reported, 20 of which are listed in Fig 1. Of most peculiar interest is the fact that all of the patients were women who had been taking oral contraceptives.

Pathologically these benign tumors have been variously described as liver hamar-

1. Twenty reported cases of benign liver tumor in women taking oral contraceptives.

Case	Source	Age	Clinical Presentation	Operative Findings	Management & Outcome
1	Baum, et al,[2] 1973	26	Sudden abdominal pain and shock	Rupture of 4.5-cm tumor in left lobe with hemoperitoneum	Left hepatectomy; did well
2	Baum et al,[2] 1973	27	Sudden abdominal pain	Rupture of 12-cm tumor, right lobe of liver	Right hepatectomy; died
3	Baum, et al,[2] 1973	25	Upper abdominal mass	12 x 6-cm tumor on 9-cm pedicle arising from left lobe of liver	Resection of tumor and pedicle; did well
4	Baum, et al,[2] 1973	25	2-month history of progressive weakness; sudden right upper quadrant abdominal pain	Tumor of right lobe of liver	Right hepatectomy; did well
5	Baum, et al,[2] 1973	29	Abdominal mass	13 x 17-cm mass arising from quadrate lobe	Excision of mass; did well
6	Baum, et al,[2] 1973	30	Sudden upper abdominal pain and shock	18 x 17-cm mass, right lobe, with rupture and hemoperitoneum	Right hepatectomy; jaundice and infection, postoperative sutures; eventually recovered
7	Baum, et al,[2] 1973	39	Sudden upper abdominal pain	10-cm tumor, right lobe, with rupture and hemoperitoneum	Right hepatectomy; hepatic insufficiency for 2 months; Further outcome not stated
8	Contostavlos 1973	37	Acute abdominal pain	15-cm tumor, right lobe, at postmortem	Died
9	Knapp & Ruebner 1974	33	Sudden abdominal pain	17 x 16-cm tumor, right lobe	Right hepatectomy; died
10	Kelso 1974	36	Sudden abdominal pain and shock	Large tumor, right lobe	1. Local resection 2. Right hepatectomy; died
11	Harvath 1972	28	Pain and abdominal mass	15 x 12 x 6-cm tumor, right lobe	Right hepatectomy; outcome not stated
12	Wilding 1970	34	Right upper quadrant mass	7.5-cm tumor, right lobe	Local resection; did well
13	Wilding 1974	35	Epigastric mass	8-cm tumor, left lobe	1. Biopsy 2. Left hepatectomy later; did well
14	Wilding 1974	51	Mass found at cholecystectomy	5-cm tumor, right lobe	Local resection; did well
15	Mays 1972	42	Right upper quadrant pain; not severe	4.5-cm tumor, right lobe, with area of subcapsular rupture	Right hepatectomy; did well

Case	Source	Age	Clinical Presentation	Operative Findings	Management & Outcome
16	Mays 1973	26	Sudden abdominal pain	10-cm tumor, right lobe, with rupture and hemoperitoneum	1. Hemorrhage controlled by sutures 2. Elective right hepatectomy at a later date; did well
17	Mays 1968	25	Sudden abdominal pain	Large tumor, left lobe	Left hepatectomy; did well
18	Antoniades	30	Sudden abdominal pain	6.5-cm mass with rupture, left lobe of liver, hemoperitoneum	Left hepatic lobectomy; Doing well
19	Antoniades	32	Upper abdominal mass	Two separate tumors in right lobe	Extended right hepatic lobectomy; doing well
20	Present Case 1975	29	Sudden abdominal pain	15-20-cm tumor, left lobe, with rupture	1. Suture 2. Ligation of common hepatic artery; doing well

tomas,[1] benign hepatomas,[2] and focal nodular hyperplasia.[3] It is thought that all of the reports describe essentially the same lesion and that the differences are mainly those of terminology.[1] No matter what the exact pathologic interpretations of these lesions, the evidence all points to their benign nature. All but one[5] of the reported lesions have been solitary, and there have been no deaths reported from tumor metastases or recurrence following resection.

The etiology of the tumors is not proven, but it is important that they have all occurred in women taking oral contraceptives. A review of "Liver Tumors and Steroids" in *Lancet* (1973)[7] pointed out that cholestatic changes and dilatation of peripheral sinusoids has been attributed to oral contraceptive agents. Perez[8] showed that the use of oral contraceptives can produce alteration in the fine structure of the liver cells while the patient remains asymptomatic and no abnormality is seen on light microscopy.

Although the link between oral contraceptives and benign liver tumors has not been proved, one would have to infer that the drugs did play some part in the etiology of these tumors. In view of the many millions of women in the world taking oral contraceptives and the relatively rarity of the lesion, it does not seem warranted to classify this as a major problem of oral contraceptives; however, one should be aware of these lesions and perform a careful abdominal examination during routine check-ups of women who take oral contraceptives.

The treatment of benign liver tumors depends upon the patient's symptoms and the size and location of the lesion. The presentation is usually as a liver mass of unknown etiology or as hemoperitoneum secondary to rupture of the lesion. The latter often can be catastrophic, as evidenced by our case and several others in the literature.

When the tumors present as mass lesions, evaluation may proceed along more conventional lines. Work-up consists of rou-

tine x-rays, liver scan, and hepatic arteriography. Hepatic arteriography is useful in helping to make the diagnosis of liver tumor as well as in predicting its resectability and whether it is benign or malignant.[9] However, the resectability and exact nature of a liver tumor can best be ascertained at laparotomy. Of the patients who have undergone elective surgery after work-up, all survived operative resection and none have had problems with recurrent disease. The patient reported by O'Sullivan and Wilding,[1] in whom the tumor was only biopsied, has subsequently undergone an elective resection and is doing well (personal communication). It is felt that elective resection, if possible, is indicated for these tumors since they have demonstrated their tendency towards spontaneous rupture with resultant grave illness.

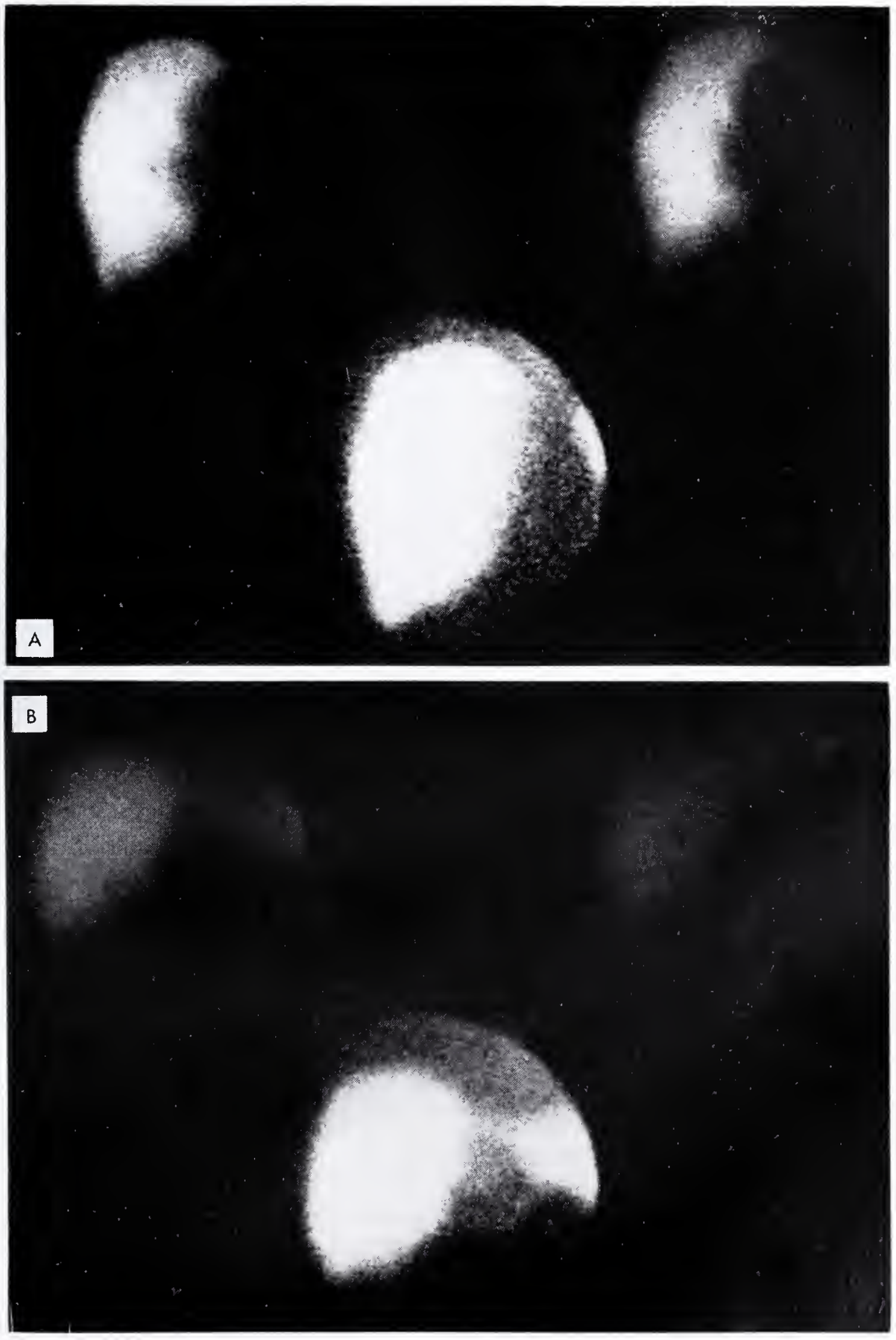
A significant number of the reported patients presented with spontaneous rupture and rapid hemorrhage and have required emergency, lifesaving surgery (Fig 1). Mortality is high in these cases. Of ten reviewed cases, four patients died. One diagnosis was made at postmortem examination. In the remaining three cases, the patients died after undergoing emergency hepatic resections. The six patients surviving emergency resection are living and well.

Our patient presented with spontaneous rupture of the tumor. Because of her condition and the tumor's size and location, we thought that resection, if possible at all, would carry a very high risk. Hepatic artery ligation, carried out as a lifesaving measure, effectively controlled the hemorrhage. We feel that resection of these ruptured tumors is to be preferred, especially if they are small or are on a pedicle. However, when dealing with a large tumor and a hemodynamically unstable patient, we feel that ligation of the hepatic artery certainly should be considered and is to be preferred over an emergency major liver resection.

Ligation of either the right or left hepatic artery selectively or the common hepatic artery is becoming an accepted method of treating exsanguinating hepatic hemorrhage, which usually results from trauma.[1,11] Aaron and associates[10] presented a series of 60 patients with traumatic liver injuries and hemorrhage treated by hepatic artery ligation with good results. The liver is able to tolerate the insult and follow-up has shown that collateral arterial circulation soon develops. Aaron and associates suggest that if the right or left hepatic artery is interrupted it should be ligated as close to the liver as possible to avoid the hilar collateral flow. When the common hepatic artery is interrupted, it should be done proximally[11,12] allowing for better collateral supply. There is little doubt that the interruption of its arterial supply does adversely affect the liver as the liver enzymes will rise and the albumin level usually falls. However, these values soon return to normal indicating hepatic compensation and collateral formation. Certainly one should not interrupt hepatic arterial supply without first using the usual conservative measures to stop liver bleeding. On the other hand, artery ligation should be considered before proceeding to major hepatic resection, especially in emergency situations.

Our patient continues to do well six months after ligation of her common hepatic artery. Results of her liver function tests have returned to essentially normal range. She does not have a palpable mass nor any pain in the liver area. Follow-up liver scans continue to show a filling defect occupying a large part of the left lobe and extending into the right lobe of the liver, but the area is definitely decreasing in size (Fig 2). We plan to continue close follow-up, but we do not feel that elective resection of such a large lesion would be called for since

2. a. Liver scan one week after surgery. Tumor of liver occupies right and left lobes of liver as seen at surgery. b. Six months after surgery, the tumor size has decreased.



the tumor is benign. Of course, another rupture is a possibility, but we hope that the lesion will continue to regress now that the patient no longer takes exogenous hormones and her common hepatic artery has been ligated.

Summary

A case of rupture of a benign tumor of the liver with ensuing hemoperitoneum and shock in a young woman taking oral contraceptives is presented. Benign liver tumors are rare but reports of their occurrence have been increasing. It is felt that oral contraceptives play some part in their etiology since in all reported cases the patients have been taking the exogenous hormones. Treatment has usually consisted of resection of the lesion with good long-term results and no reported recurrence of the tumor. When the presentation is one of rupture, hemoperitoneum, and shock, the mortality is significant. After a trial of conservative measures, our patient was treated by ligation of the common hepatic artery which readily controlled the hemorrhage. We feel that attemped liver resection would have been fatal in this patient because of the size and extent of the tumor.

Hepatic artery ligation is being used more and more for control of liver bleeding, usually secondary to trauma. This is a useful technique and probably should be used more, especially when the surgeon is inexperienced in hepatic resection and available blood is not adequate for emergency hepatic resection.

Addendum

Since this article was written, there have been numerous other reports of benign liver tumors in women taking oral contraceptives. Our patient has continued to do well and her latest liver scan showed no sign of the tumor. We still feel that these tumors should be resected if that can be done easily. However, in view of the fact that these lesions may regress with cessation of oral contraceptives, we feel that one should strongly consider biopsy diagnosis only and close follow-up in those patients who would require a major hepatic resection, with its attendant mortality and morbidity, for removal of these histologically benign lesions.

References

1. O'Sullivan JP, Wilding RP: Liver hamartomas in patients on oral contraceptives. Br Med J 2:7-10, 1974.

2. Baum JK, Bookstein JJ, Holtz F, et al: Possible association between benign hepatomas and oral contraceptives. Lancet 2:926-929, 1973.

3. Mays E, Christopherson WM, Barrows GH: Focal nodular hyperplasia of the liver. Possible relationship to oral contraceptives. Am J Clin Pathol 61:735-746, 1974.

4. Editorial: Liver tumors and the pill. Lancet 3:3, 1974.

5. Antoniades K, Campbell WN, Hecksher RH, et al: Liver cell adenoma and oral contraceptives. Double tumor development. JAMA 234:628-629, 1975.

6. Henson SW Jr, Gray HK, Dockerty MB: Benign tumors of liver; adenomas. Surg Gynecol Obstet 103:23-30, 1956.

7. Editorial: Liver tumors and steroids. Lancet 3:1281, 1973.

8. Perez V, Gorosdisch S: Oral contraceptives: long term use produces fine structural changes in liver mitochondria. Science 165:805-807, 1969.

9. Kim DK, McSweeney J, Yeh SD, et al: Tumors of the liver as demonstrated by angiography, scan and laparotomy. Surg Gynecol Obstet 141:409-410, 1975.

10. Aaron S, Fulton RL, Mays ET: Selective ligation of the hepatic artery for trauma of the liver. Surg Gynecol Obstet 141(2):187-189, 1975.

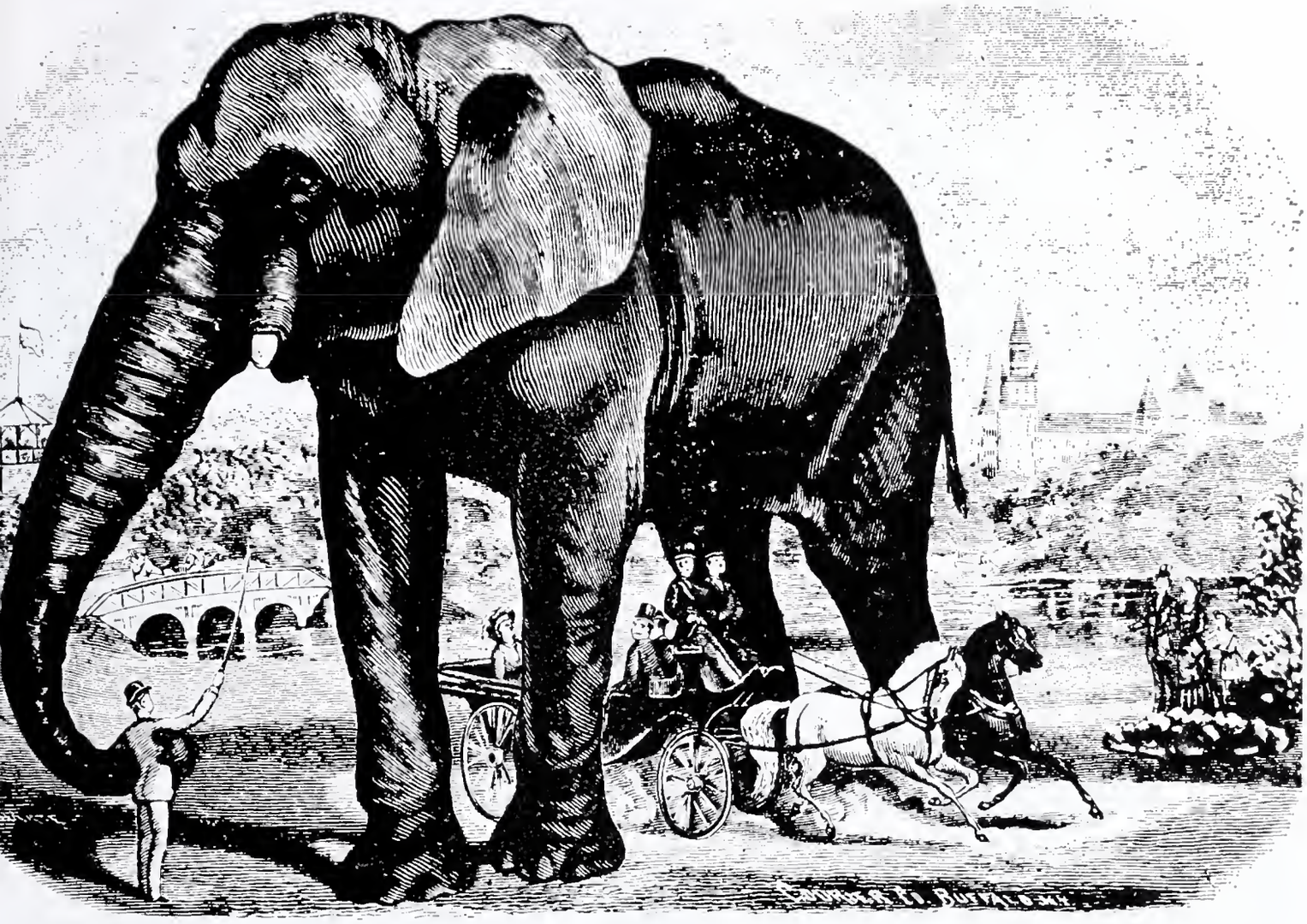
11. Stone FA, Siderius NJ, Goodman JM, et al: Treatment of exsanguinating rupture of the right lobe of the liver by ligation of the main hepatic artery. Case report. Ann Surg 162:933-937, 1965.

12. Schwartz SJ: Principles of surgery. Philadelphia, WB Saunders Co, 1969, pp 1036-1037.

13. Antonaides K, Brooks CE Jr: Hemoperitoneum from liver cell adenoma in a patient on oral contraceptives. Surgery 77(1):137-139, 1975.

Drs. Turney and Bellegie, 1925 N 25th St, Waco, TX 76707.

Dr. Shipp, 3115 Pine, Ste 304, Waco, TX 76708.



See The Motorcycle ?

You may not find a motorcycle in this picture, but you'll find plenty of them on Texas' streets and highways.

The trouble is, not enough automobile drivers are seeing motorcycles when they should. Not until it's too late, anyway.

Maybe if motorcycles were as big as elephants, you'd be more careful when you see them. But nothing is bigger than human life. And that's what we're really asking you to look out for.

CycleSafe

The Governor's Office of Traffic Safety

Starlite Village Hospital

Center Point, Texas

Ph.: 634-2212
634-2213

- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

CHAMPUS APPROVED
JCAH: ACCREDITED.

Bank Financing for Physicians

We specialize in equipment leasing and financing, unsecured loans and lines of credit to Physicians And we handle it all by mail.

Unsecured loans with optional dollar amounts (to $10,000), optional payment schedules. Equipment leasing to give you tax advantages, restore operating capital, convert unused depreciation to cash. And lines of credit to provide for future cash needs.

We charge tax deductible bank rates. You won't spend any of your valuable time at your bank, and you'll reserve your regular bank credit for times when you really need it.

For further information, complete and mail this coupon today. I want to know more about:

__ Unsecured Loans __ Sale & Lease Back Plans
__ A Line of Credit __ Lease-Purchase Plans
__ Equipment Leasing __ Equipment Financing
__ Other: _____

Dr. _____ Phone _____
Address _____
City _____ State _____ Zip _____

Professional Services Division
TEXAS BANK AND TRUST COMPANY
P. O. Box 101 Jacksonville, Texas 75766

BRIEF SUMMARY OF
PRESCRIBING INFORMATION

ANTIMINTH® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

When you're good people recognize you.

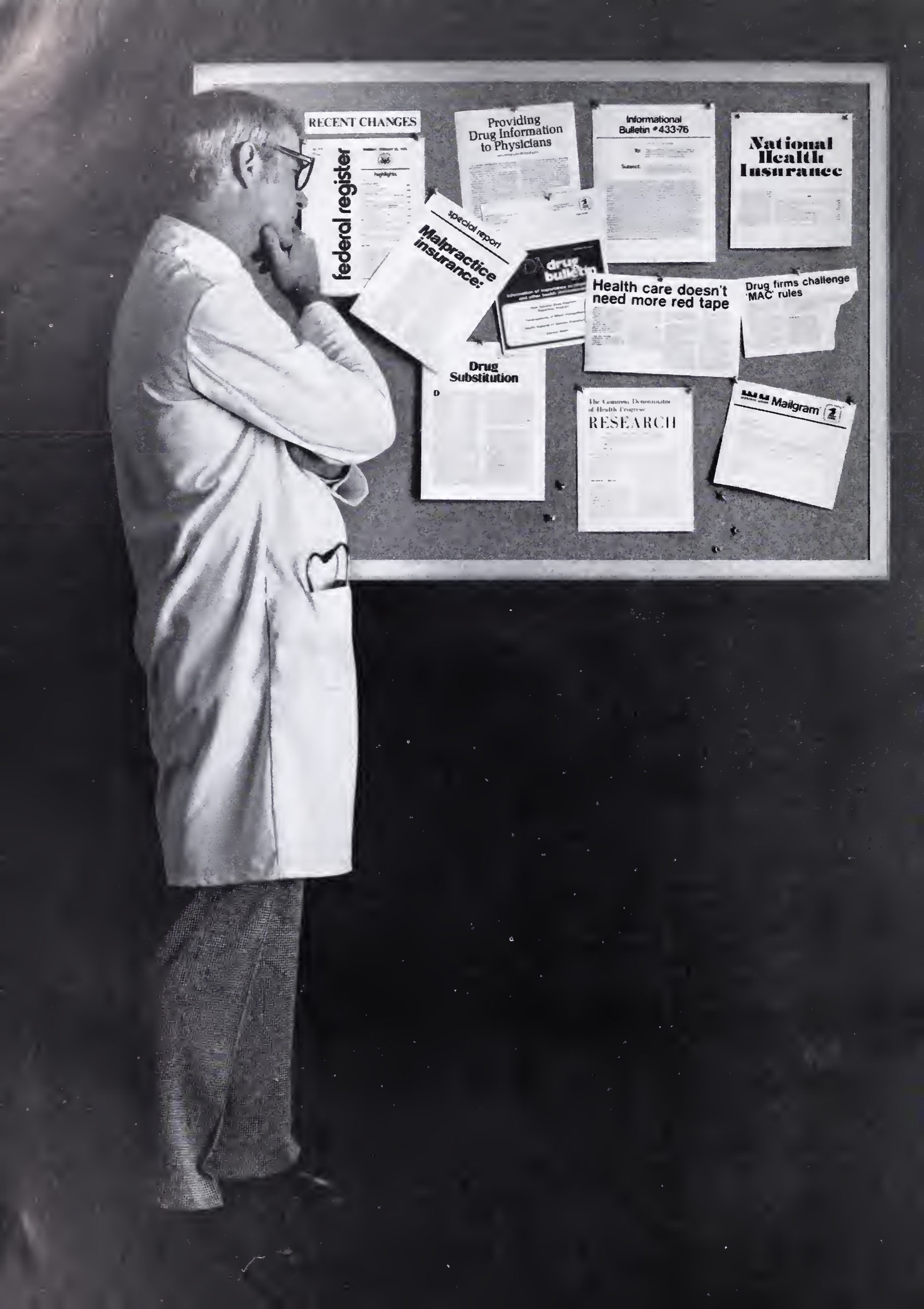
Highly effective
Single-dose convenience
Non-staining
Economical
Pleasant tasting

Antiminth®
(pyrantel pamoate)
equivalent to 50 mg pyrantel/ml
ORAL SUSPENSION

a drug of choice in pinworm infections

Please see brief summary of prescribing information on facing page.

©1977 LONE RANGER T.V., INC.


RECENT CHANGES
federal register
highlights
Providing Drug Information to Physicians
Informational Bulletin #433-76
Subject:
National Health Insurance
special report
Malpractice insurance:
drug bulletin
Health care doesn't need more red tape
Drug firms challenge 'MAC' rules
Drug Substitution
RESEARCH
Mailgram

THERE ARE A LOT OF PEOPLE GETTING BETWEEN YOU AND YOUR PATIENT.

Medicine today is in the spotlight, subjected to all kinds of scrutiny. Your control over patient therapy is being monitored, judged and occasionally abrogated, sometimes by unknown third parties.

The worry is that in the wake of this focus, the relationship between you and your patient will be weakened, without offsetting benefits. Consider three examples:

Drug substitution In most states, pharmacy laws, regulations or professional custom stipulate that your non-generic prescriptions be filled with the precise products you prescribe. But in the last five years, a dozen or more State laws have been changed, permitting the pharmacist in most cases to select a product of the same generic drug to fill any prescription.

Ironically, this dilution of physician control has taken place against a background of growing evidence that purportedly equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA itself says it has not enforced the same standards for hundreds of "follow-on" products that it had applied to the original NDA approvals. Thus physician control over patient therapy is being eroded with a risk that patients may be exposed to drugs of uncertain quality.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant savings has been produced.

MAC Maximum Allowable Cost, MAC for short, is a Federal regulation designed to cut the Government's drug bill by setting price ceilings for drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the Government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right. Practicing doctors will have little to say about administration of the program, since Government will have absolute authority to make its choices stick.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to your patients: The cost of the research is more than ten times what it was, per product, in 1962; and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present approval process contributes to needless delay of needed therapy. That's why the increased efficiency of the drug approval process is vital to all our futures.

If these issues concern you, we suggest that you make your voice heard—among your colleagues and your representatives in State legislatures and in Washington.

It could make a difference in your practice tomorrow.

P·M·A
Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

Necrotic venules ensheathing exogenous particles as harvested from transfusion filters

Gus Schreiber, MD

Examination of the material harvested in blood filters reveals large numbers of necrotic infarcted venules and capillaries, with and without their basement membranes and with and without ensheathed exogenous particles. In particular, previously described club-shaped emboli in the conjunctival vessels are classified and their nature is demonstrated. The relationship of these degenerative foreign tissues to the acute respiratory syndrome is suggested.

The human blood as it is ordinarily drawn, stored and transfused contains exogenous particulate matter other than erythrocytes, leukocytes, platelets, and hemoconia.[1] An anisotropic embolic fiber within an intravascular foreign body granuloma and a cellulose fiber were shown in a section of blood vessel following cardiac catheterization.[2] Dyed cellulose material has been shown to pass into the blood stream and urine from the intestinal tract.[3] Similarly, the actual penetration of intestinal wall by spherical starch granules was demonstrated in rats.[4] Possibly the exogenous fibers demonstrated at autopsy after cardiac catheterization gained entry through the intestinal tract.[5] My report demonstrates, with photomicrographs, exogenous matter present *within* apparent infarcted venules in the blood collected from healthy blood bank donors.

Materials and Methods

Blood was drawn into plastic bags containing citrate-phosphate-dextrose (CPD). The donor's arm was carefully prepared. The blood was later transfused to patients. When a transfusion was completed, the entrance filters were removed from the transfusion set in the following manner: The outer wall of the filter was cut with scissors rinsed in intravenous saline. The filter was then cut from its proximal attachment with these scissors. Refrigerated, sterile, normal saline (Baxter) was gently poured into the filter to remove the contained blood. The filter was cut to the bottom and split open lengthwise with the scissors. The contents of the inside of the filter were washed into a saline-rinsed beaker. This washing included brushing the inside of the filter. The turbid contents of the beaker were treated in one of the following ways:

1. The contents were centrifuged at 300 xg for 20 minutes. The supernatant was discarded. The sediment was dispersed by adding 5 ml of normal saline solution. The material was fixed in 10% buffered formalin.[6] After one hour centrifugation was repeated. The supernatant fluid was removed, and 4 ml of sterile distilled water (Baxter) was added to disperse the particulate matter. The suspension was aspirated and placed on clean glass slides in a slide-drying box as described previously.[3] The dried slides were stained with Wright's stain and coverslips were applied.

2. The contents obtained from one unit of blood were divided into halves. Each half was filtered through a 47-mm membrane filter (Millipore). The membrane filter was cut into halves. The half-filter side in contact with the particulate matter was applied to albumin-coated slides. The slides were then immersed in 85% ethyl acetate for 35 minutes to dissolve the filter. The slides were then stained by the Papanicolaou technique and mounted, and coverslips were applied.

3. The contents obtained from the filters from five units of blood were centrifuged at 300 xg for 20 minutes. The supernatant was discarded. The sediment was

dispersed and suspended in 10% buffered formalin. After one hour, centrifugation was repeated and again the supernatant was discarded. The sediment was dispersed and then suspended in 95% alcohol. After ten minutes centrifugation was repeated, supernatant was discarded, and the sediment was removed for cell block preparation in paraffin sections.

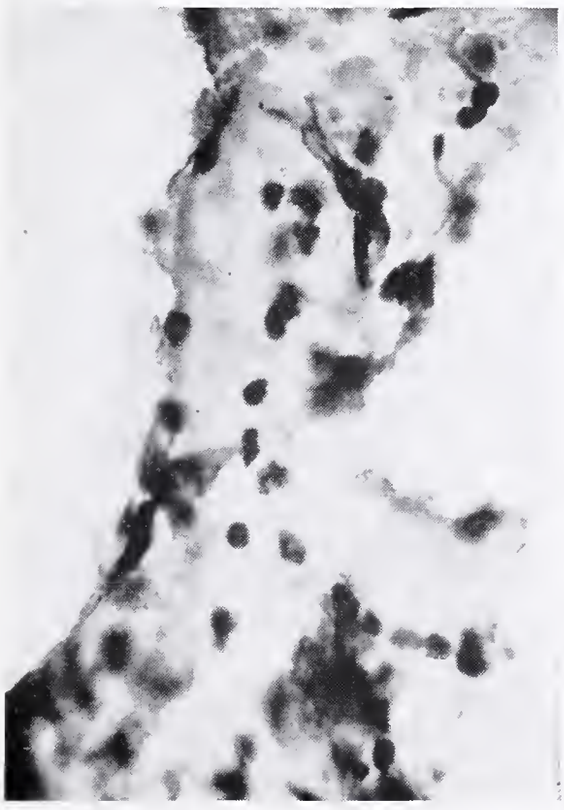
The slides were examined at all magnifications by brightfield, Zernicke-type phase, and polarized light microscopy. Polarized microscopy was performed with crossed Polaroid HN 22 linear polarizers. A retardation plate was placed between them when the type of birefringence was to be determined. The analyzer was placed in the body of the trinocular microscope. The oil immersion objective of the phase microscope permitted definite optical sectioning of the thick objects examined. Photomicrographs of the thicker vascular fragments were obtained with a dark red filter to darken the basophilic stain of the nuclei and to lighten the eosinophilic stain of the thrombi. The color photomicrographs are of the hematoxylin-and-eosin-stained 4-micron-thick paraffin sections of the cell block technique of method 3.

Results

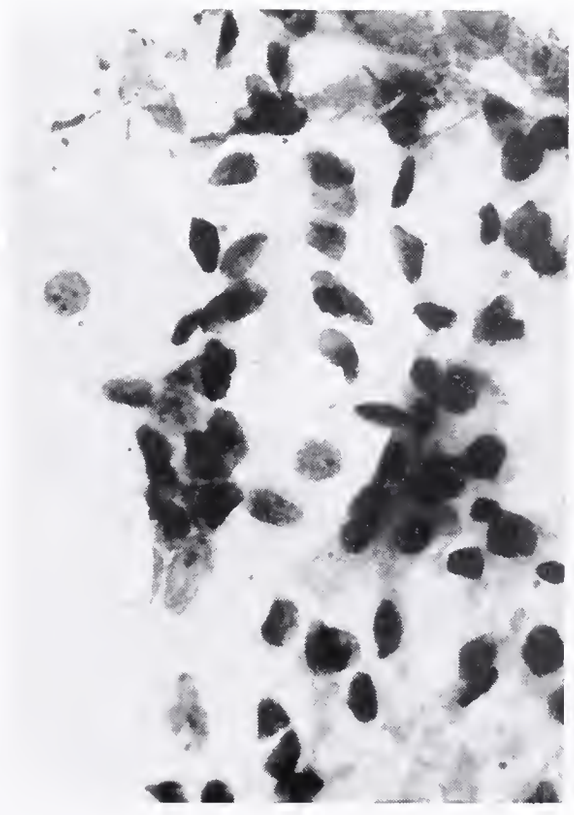
Thirty filters were examined (15 by method 1 and 15 by method 2). Ten slides were examined as prepared in the cell block by method 3. By the centrifugation technique of method 1, the sediment measured 0.2 ml (average) per unit of blood (0.04%). The total count of particles contained within the 225-micron pores of the transfusion filter as estimated by method 2 was more than 200 per unit of blood.

The slides revealed a "graveyard" of microvascular tissues, membranes, and thrombi in various stages of autolysis and acidification, hyalinization, and a waxy caseation, respectively. (Unfortunately such degenerating tissues do not permit optimal photomicrographs). A few "needle biopsies" of vein walls were seen and considered as artifacts for purposes of this report. In particular, brightfield microscopy

1. Thrombosed bypass capillary with only a remnant of basement membrane at lower right portion. The contractile muscle cell nucleus appears as an octopus. Method 1. X 590.



2. Collapsed empty venule with two layers of endothelium; most of the nuclei show autolysis. Method 1. X 590.



showed interconnecting venules and capillary lining fragments, some containing waxy (or caseous) thrombi and some empty. As the thrombi appeared to shrink in various vessels there resulted a concentration of degenerated endothelial nuclei and a separation of the thrombus with its endothelial cells from the basement membranes. The Wright's stain of method 1 showed the membranes as being basophilic, whereas the Papanicolaou technique of method 2 left some of them unstained and difficult to visualize.

Polarized and phase microscopy demonstrated that many of the thrombosed vessels contained exogenous particles within the thrombus, within the vessel wall, and within the basement membrane. The interpretation and appreciation of the material present in the cell block slides of method 3 requires that one first study slides prepared by methods 1 and 2. Slides prepared by method 3 particularly illustrated vast numbers of long, large, thrombotic casts with the regular appearance of endothelial nuclear fragments; most of these casts were waxy or caseous in appearance and slightly eosinophilic. The slides from one donor (prepared by method 2) showed several adjacent nonpolarizing rectangular deposits adjacent to barely visible polarization crosses (of starch or lipid) within vessel wall.

The photographic illustrations of material prepared by methods 1 and 2 will depict either obvious vessels with regularly placed nuclei or will depict the least degenerated nuclei for evaluation, or both simultaneously. The color illustrations of material prepared by method 3 will demonstrate horizontal sections through the walls of vessels and cross sections of branching vessels illustrating the caseous thrombi within.

Fig 1 shows a bypass capillary which (although not shown) connects two capillaries to three capillaries. Only small fragments of membrane are present. Rows of endothelial nuclei which demonstrate autolysis seem to bulge from the contained thrombus of this branching tube. The thrombus is eosinophilic and red cell membranes are visible by phase microscopy. Note the octopus shaped nucleus of a contractile muscle cell (pericyte or Rouget cell).[7]

Fig 2 illustrates a flattened empty tube of a venule with no basement membrane with two layers of cells evenly spaced, most of the nuclei demonstrating autolysis. The large cell on the left might be demonstrating mitosis in its nucleus.

Fig 3 shows a short portion of a long venule with a contained thrombus, as in Fig 1. Note the basophilic staining basement membrane adherent to the left side.

Fig 4 shows two legs of a branching venule wall with two layers of endothelium with a few small areas of membrane present.

Fig 5 illustrates a large venule with multiple branches. The dark areas indicate the presence of a basophilic basement membrane, which prevents seeing through this venule. Where it is not present, regularly spaced nuclei with autolysis are seen. The entrance foraminae of smaller branches are noted where the membrane is absent.

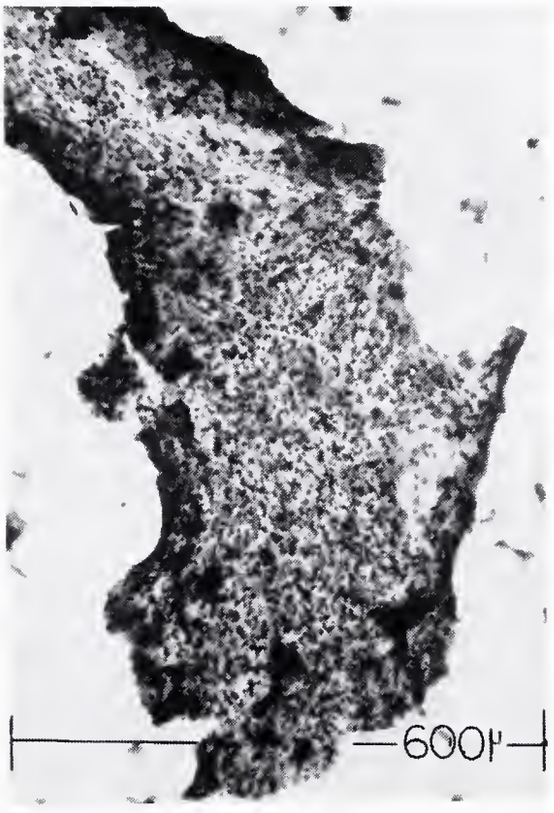
Fig 6 shows a smaller, less degenerated, branching venule with smaller branches, some ensheathed with basophilic basement membrane. Where this membrane is not present, the evenly spaced endothelial nuclei surrounded by clear cytoplasm is seen.

Fig 7, top, shows a large venule which is connected by its barely visible basement membrane to various smaller branches (bottom). The thrombi are shrunken and covered with shrunken endothelium which has separated from its basement membrane. These spherical bodies might well be granulomas forming about the old degenerated clots.

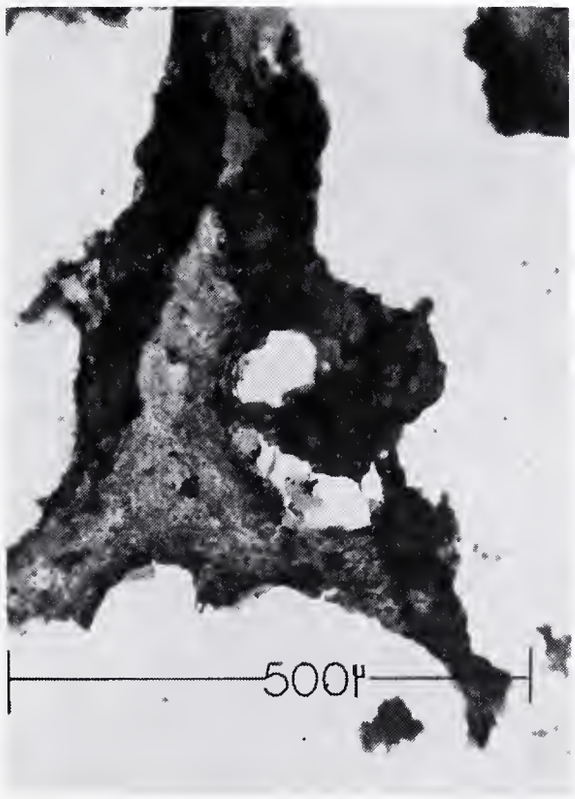
Fig 8 is interpreted to show a tortuous, long, thick, "waxy" thrombus with regularly spaced fragments of endothelial nuclei on its outer surface. The center appears to be free of these fragments because this thick body prevented focus of

3. Small portion of large thrombosed venule with basement membrane demonstrated on the left side. Two layers of degenerated nuclei. Arrow indicates a bilobed eosinophil. Method 1. X 235.

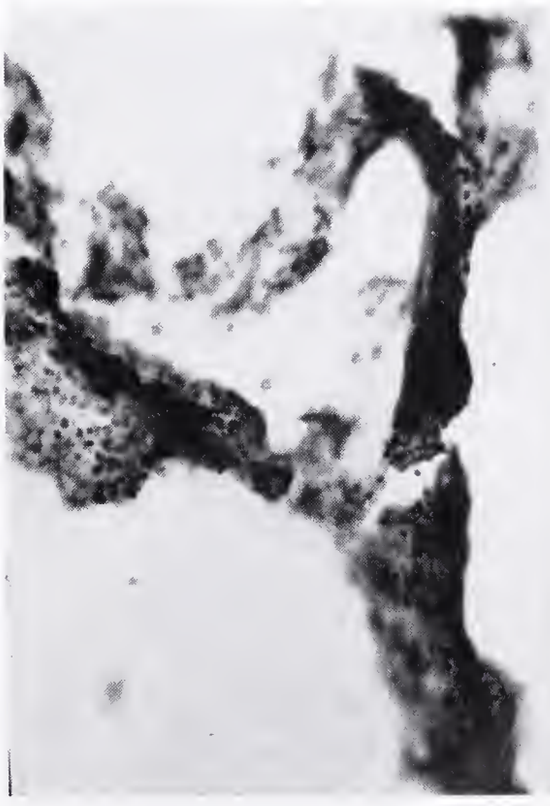
4. Large fragment of empty venule with one branch present, other not present. Two layers of nuclei are present in empty tube with few small fragments of membrane. Method 1.



5. Large venule with multiple branches. Where the basement membrane is absent the entrance foraminae of the smaller vessels are visible. Invisible "waxy" thrombus within the vessel. Method 1.



6. Branching venule containing invisible thrombus, smaller branches covered with membrane. Evenly spaced nuclei with autolysis with clear cytoplasm apparent where basement membrane is absent. Method 1. X 120.



either its top or its bottom when its sides were in focus. Some small areas of basement membrane fragments also appear. Such casts are the largest and the most numerous of the particles found in the filters.

Fig 9 shows a positive polarization cross within a thrombosed venule. Without polarized light, this cross appeared as a sphere with a nucleus and a fissure, fulfilling the requirements for the morphological diagnosis of a starch granule. Phase microscopy showed this starch granule to be within the center of this tube of clot. The nuclei of this venule are difficult to see distinctly because no red filter was used to eliminate the eosinophilic stain.

Fig 10 shows an endothelial-covered thrombus illustrating a fiber of cellulose passing through its center with its barely visible basement membrane encircling it at both ends (in focus at the top of the fiber).

Fig 11 is similar to Fig 10, the end of the cellulose fiber being in the center of the thrombus. The arrow indicates a black ashed particle beneath the endothelium within the clot.

Fig 12 shows a small piece of cellulose; the crystal ending in the center of this basophilic-appearing "club" ensheathing its upper end.

Fig 13 appears to illustrate a large thrombus, covered with evenly spaced nuclei, which contains a fiber of cellulose curving toward the left. The upper end of this fiber is ensheathed with a shrunken basophilic "club," thus forming a "club within a club."

Fig 14 shows a fiber of cellulose attached to an apparently shrunken basophilic basement membrane and shrunken endothelial venule. At the upper right, a tissue-ensheathed starch granule is illustrated.

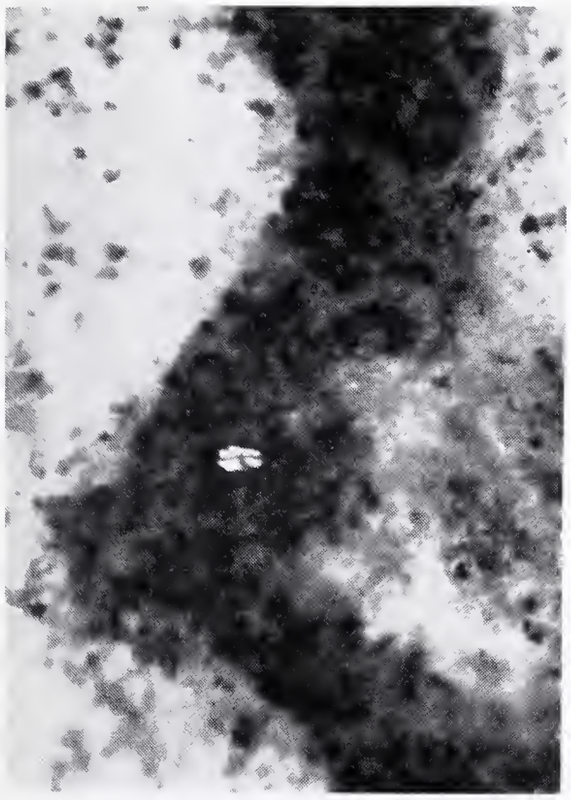
Also present within vessels were silica cells, flat mica-like silicates, long stiff cellulose fibers and snarls of smaller fibers, black ash type particles, starch granules, and one diatom.

Figs 15 through 19 show horizontal sec-

7. Basement membrane of branching venule containing shrunken thrombi ensheathed with concentrated endothelial cells (small arrows). Large arrow indicates the barely visible basement membranes. Red filter. X 60. Papanicolaou stain of method 2.

8. Apparent long, tortuous, degenerated cast-thrombus with regularly spaced basophilic fragments of endothelium. Clear center is due to inability to focus top or bottom of this thick object with edges in focus. Method 2. X 120.

9. Positive polarization cross of apparent starch granule within thrombosed venule. No red filter. Polarized light. Method 2. X 240.



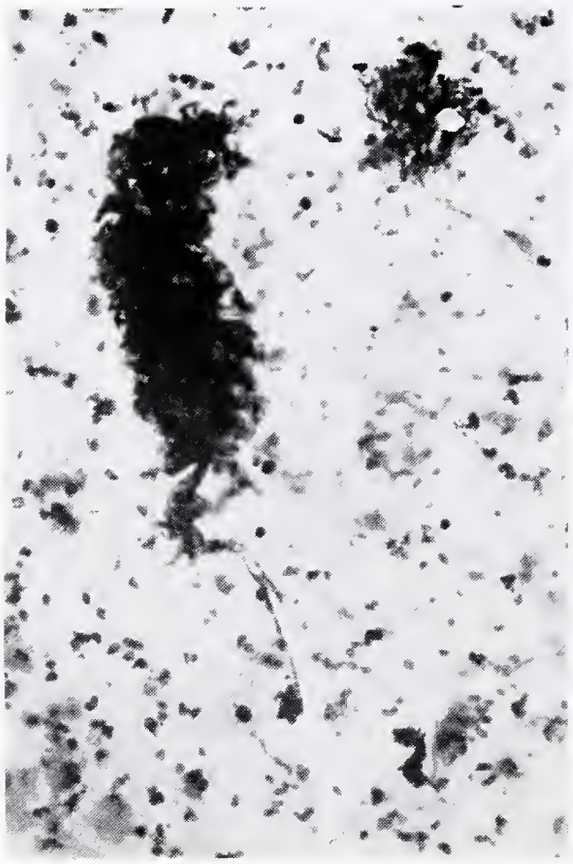
10. Cellulose fiber extending through an endothelial covered thrombus; the basement membrane ensheathing both ends of the fiber is in focus at upper end. Method 2. X 240.

11. Cellulose fiber ending in center of shrunken thrombus covered with endothelial nuclei. The basement membrane ensheaths the fiber at its entrance. Arrow indicates black particle as part of vessel wall. Polarized light with red filter. Method 2. X 240.

12. Small cellulose fiber capped with basophilic nuclear and membrane appearing material. When polarized light was used, this fiber was demonstrated to end in the center of this "club." Method 2. X 590. No polarized light used for the illustration.

13. Cellulose fiber within *basophilic nuclear material* within *a large endothelial-covered thrombosed vessel whose nearly invisible membrane ensheaths the fiber. Brightfield. Method 2. X 240.*

14. Cellulose fiber attached to lower tip of shrunken basophilie "vessel." On the right a separate smaller "vessel" containing a positive polarization eross. Polarized light. Method 2. X 240.



tions of vessel walls by method 3. Fig 17 illustrates the best preserved nuclei and also shows the pavement-like cell boundaries of endothelium. The division of this wall into two branches is shown with no basement membrane being present. Fig 19 shows nuclei with autolysis, most of this illustration demonstrating basement membrane in horizontal section.

Figs 20 through 22 demonstrate oblique or cross sections of vessels or branches of vessels, the caseous or waxy degenerated thrombi being ensheathed by endothelium or basement membrane of endothelium. The branching vessels and thrombi of Fig 22 are of comparatively small size of many present. Red cells not removed from the filter are present on all of these slides which serve as markers for the size of the vessels.

---

15. Horizontal section through wall of venule with nuclei showing autolysis. No basement membrane noted. Method 3. X 2,000.

16. Horizontal section through wall of venule, which includes basement membrane on both sides of a branching vessel. Method 3. X 2,000.

17. Horizontal section through branching venule wall showing cell boundaries and the whole and the tips of autolytic endothelial nuclei. No basement membrane observed. Method 3. X 2,000.

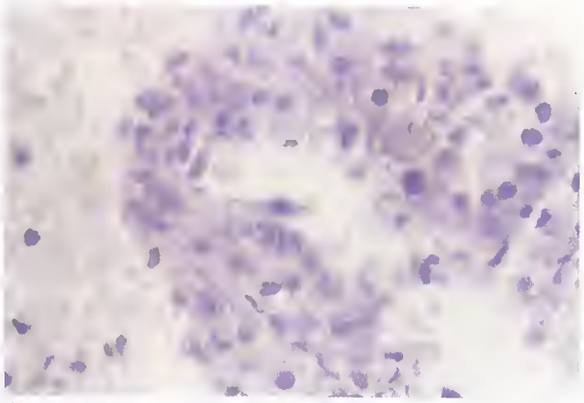
18. Horizontal seetion through wall at bend of venule showing the horizontal fold of basement membrane in its center. Method 3. X 2,000.

19. Horizontal seetion of vessel wall with the upper left portion showing mostly basement membrane. Method 3. X 2,000.

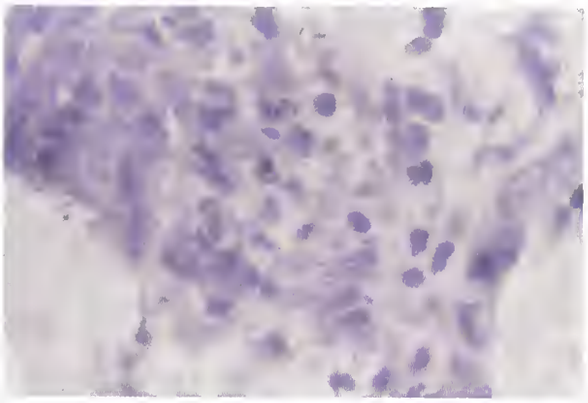
20. Oblique seetion of venule illustrating autolytic nuclei of endothelium on the right side, a waxy degenerating thrombus which is ensheathed at its bottom in the illustration by basement membrane. The clear spaces on the right among the endothelial nuclei may indicate the longitudinal folds of the basement membrane. Method 3. X 800.

21. Cross section through a branching venule with endothelial membranes and nuclei on both sides of the Y-shaped thrombus. Method 3. X 2,000.

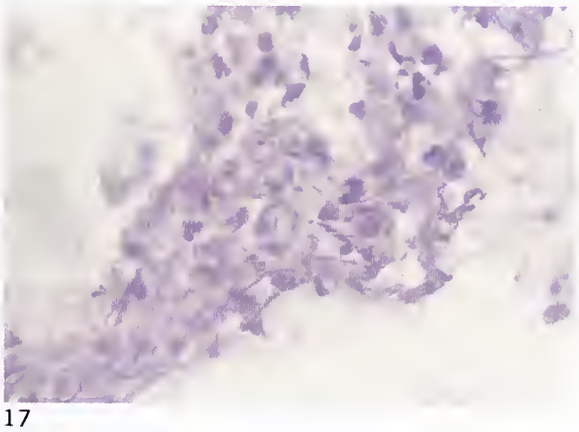
22. Horizontal section through a comparatively small specimen of branching venule showing degenerated thrombus ensheathed with basophilic membranes sectioned at an angle. Method 3. X 800.



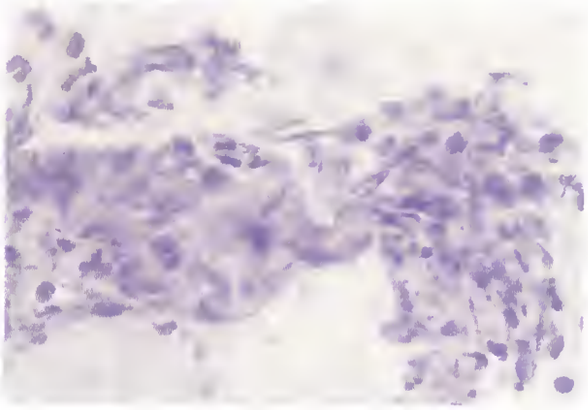
15



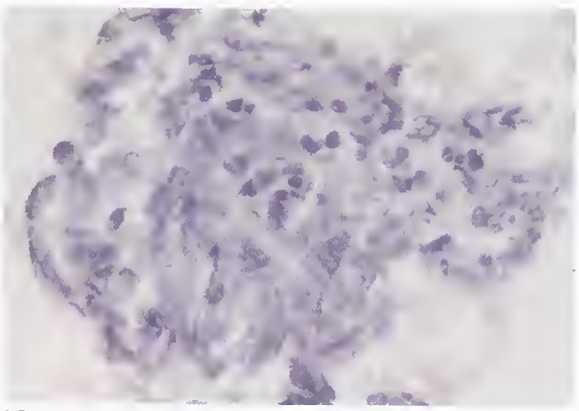
16



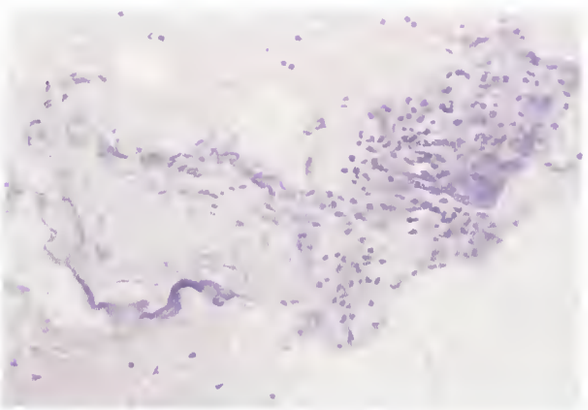
17



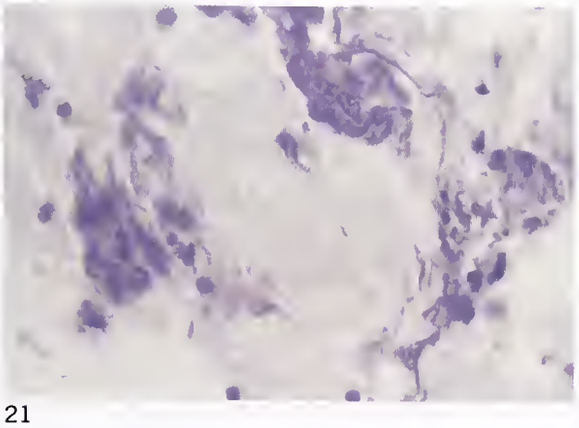
18



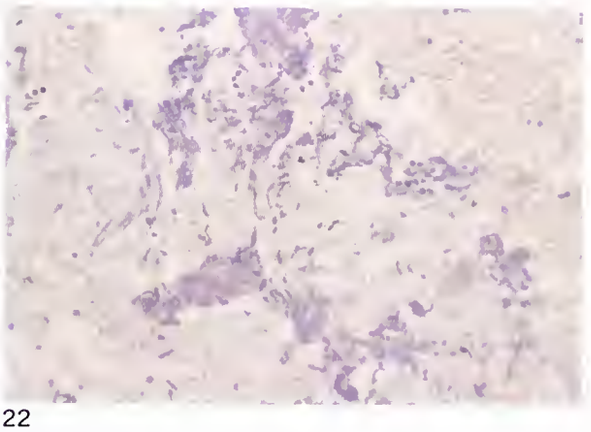
19



20



21



22

Discussion

Filters included in transfusion sets retained segments of tissues along with ensheathed exogenous particles. The passage of dyed cellulose from the intestinal tract into both the blood and urine has been demonstrated,[3] with the dyed fibers being present in urine for months. The actual penetration of the intestinal villi of rats by starch granules also has been shown.[4] Arterial as well as venous blood has been shown to contain exogenous matter by hemolytic technique.[1] Bloch[8] demonstrated multiple transparent, highly refractile, rigid aggregates measuring from 10-60 μ which persisted in place in the conjunctival vessels for months. Ruedemann[9] also reported "knob-shaped" emboli within the conjunctival vessels. Spitz and Schmidt[12] reported that diatoms and latex particles up to a diameter of 90 μ appeared in the bloodstream of dogs ten minutes following oral administration with an increase in number and size of the particles for up to two hours.

A recent report[2] showed a cross-section of an anisotropic embolic fiber within an intravascular foreign body granuloma, and also illustrated a longitudinal section of a cellulose fiber within a blood vessel. These were found at autopsy in subjects who had undergone cardiac catheterization. It was concluded by the authors that the fibers were the result of iatrogenic contamination of the blood stream. Since these authors were unaware of any of the literature within this present report, the question was raised[5] as to whether these fibers were introduced by manipulation or by the penetration of the intestinal tract as previously reported.[1,3] The demonstration of embolic material in the blood obtained from healthy donors would tend to incriminate natural ports of entry such as the intestinal or respiratory tracts.

It is possible that the embolic material in transfused blood might produce respiratory distress syndrome in patients who receive massive replacement on an emergency basis. This was supported by the observation that the use of 40 μ pore filters reduced the incidence of such a syndrome.[10] Since the recipient's own blood would appear to have the same particles embolizing his pulmonary vasculature, this reaction must be a temporary (or fatal) reaction to the degenerating foreign vascular and thrombotic debris. This might also be the explanation for the occasional transfusion reaction to a single transfusion of properly matched blood. These conjectures would indicate the need of a minimal pore (14 μ) transfusion filter, probably best used at the time of the donation.[11]

Fig 23 illustrates a possible explanation of the production of a vicious circle from one circulation to the other by the production of static blood, infarction, and then embolization in normal subjects. The effects of multitudes of pulmonary and peripheral emboli, of degrading endogenous and foreign proteins and carbohydrates in blood and tissues, and the effects of crystals which contact and possibly occasionally divide nuclei can only be surmised at present.

References

1. Schreiber G: Embolic dispersoids in health and disease. Springfield, Ill, CC Thomas Co, 1960.

2. Dimmick JE, Bove KE, McAdams AJ, et al: Fiber embolization—a hazard of cardiac surgery and catheterization. N Engl J Med 292(13):685-687, 1975.

3. Schreiber G: Ingested dyed cellulose in the blood and urine of man. Arch Environ Health 29:39-42, 1974.

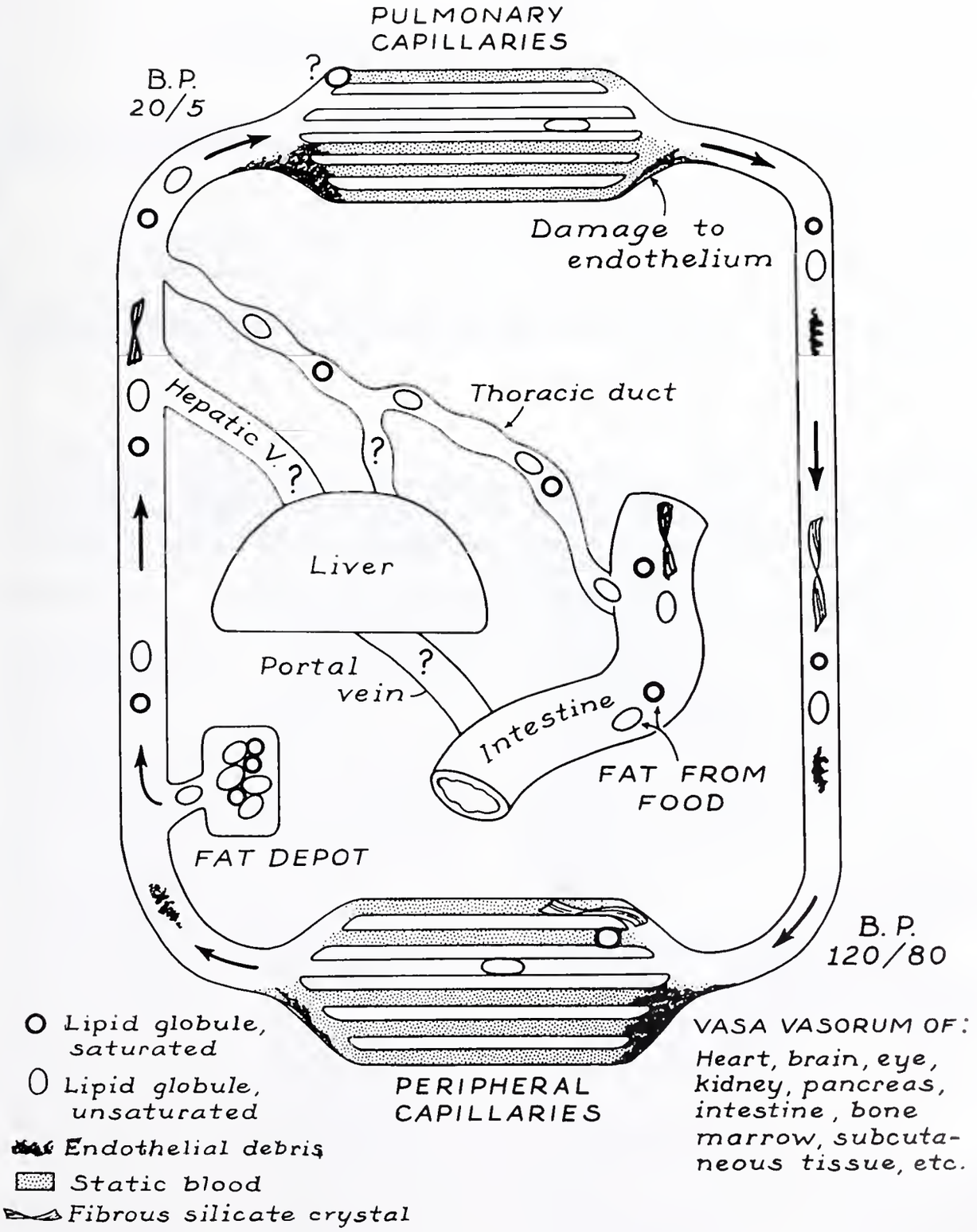
4. Volkheimer G: Persorption. Gastroenterologie und Stoffwechsel Band 2. Herausgegeben von H. Bartelheimer, HA Kuhn, V Becker, F Stelzner, Georg Thieme Verlag Stuttgart 1972.

5. Ingelfinger FJ: Editorial: Detritemia. N Engl J Med 292(13):696-697, 1975.

6. Carson FL, Martin JH, Lynn JA: Formalin fixation from electron microscopy; a re-evaluation. Am J Clin Pathol 59:365-373, 1973.

23. Simplified concept of how static blood produced in one circulation can become an embolus to the next circulation, forming a vicious circle.

Reproduced with permission of CC Thomas Co, Springfield, Ill.[1]



7. Zimmermann, Zschr Anat Entwicklungs, vol 68 as illustrated by Copenhaver WM in: Bailey's Textbook of History, 15th ed, Baltimore. The Williams & Wilkins Co, 1964, pp 256-257.

8. Bloch EL: Microscopic observations of the circulating blood in the bulbar conjunctiva in man in health and disease. Berlin, Heidelberg, Gottlingen, Springer-Verlag, 1956.

9. Ruedeman AD: Conjunctival vessels. JAMA 101: 1477-1481, 1933.

10. Reul GJ Jr, Beal AC Jr, Greenberg SD: Protection of the pulmonary microvasculature by fine screen blood filtration. Chest 66:4-9, 1974.

11. Schreiber G: Minimal pore blood transfusion filter. US Pat No. 4016077 issued April 5, 1977.

12. Spitz WU, Schmidt H: Weitere Untersuchungen zur Diagnostic des Ertrikungstodes durch Diatomeennachweis, Deutsche Zeitschrift fur gerichtlich Medizin 58:195-204. 1966.

Dr. Schreiber, 5619 W Caruth Blvd, Dallas, TX 75209.

Equipment and research costs supported by author and wife, Susan T. Schreiber.

Acknowledgement: Pamela A. Terrell CT (ASCP) for suggesting and performing the Millipore filtrations and the Papanicolaou stainings.

Editor's Note: The consultants and members of the Scientific Publication Committee who reviewed this article expressed several different opinions about the interpretation of the material described. The Committee prefers not to take a position, but believes that *Texas Medicine* does have a place for articles that stimulate healthy and open discussion.

Dr. Schreiber has presented his hypothesis in the accompanying text and illustrations. Some of the reviewers' comments are as follows:

"The illustrations do not clearly illustrate what they are purported to. The presence of microaggregates in stored blood is a well-described phenomenon. These aggregates increase with the age of the stored blood; it would have been helpful to know how old this blood was. I do not believe that we can conclude that these aggregates demonstrated *in vitro* necessarily occurred *in vivo* in the donor."

"It is of very limited interest."

"The article intrigues me. Perhaps it is too technical and limited for our readership, but it spices up our publication to have an article like this one appear occasionally."

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

TEXAS REPRESENTATIVES

A. F. Ennis, Jr. and B. C. Crim, Suite 210, 712 N. Washington, Dallas 75246	Telephone (214) 821-4640
W. L. Kirk, 1508 Hermann Prof. Bldg., Houston 77030	Telephone (713) 797-9835
M. C. Rollons, 408 GPM Bldg., South Tower, San Antonio 78216	Telephone (512) 344-5901

KELSEY-SEYBOLD CLINIC

TEXAS MEDICAL CENTER • 6624 FANNIN STREET • HOUSTON, TEXAS 77030 • AC (713) 797-1551

INTERNAL MEDICINE

Allergy
C. W. Ewing, M.D., F.A.C.A.

Arthritis and Rheumatic Diseases
J. W. Kemper, M.D., F.A.C.P.
M. S. Fischer, M.D.

Cardiology
E. F. Beard, M.D., F.A.C.P.
D. D. Goulden, M.D.
M. J. Mihalick, M.D.

Endocrine and Metabolic Diseases
M. P. Kelsey, M.D., F.A.C.P.
A. E. Leiser, M.D., F.A.C.P.
P. K. Champion, Jr., M.D., F.A.C.P.

Gastrointestinal Diseases, Endoscopy
J. R. Kelsey, Jr., M.D., F.A.C.P.
P. S. Bentlif, M.D., F.A.C.P.
R. D. Eichhorn, M.D., F.A.C.P.
F. S. O'Neil, M.D., F.A.C.P.
J. W. McBee, M.D., F.A.C.P.

General Internal Medicine
G. E. Burke, M.D.
C. F. Taboada, M.D., F.A.C.P.
N. H. Nauert, Jr., M.D.
G. G. Bourianoff, M.D.

Hematology
J. B. Bart, M.D., F.A.C.P.

Infectious Diseases
S. Riggs, M.D., F.A.C.P.

Nuclear Medicine
D. E. Mouton, M.D., F.A.C.N.M.

Oncology
E. N. Root, M.D.

Pulmonary Diseases, Bronchoscopy
S. P. Fischer, M.D., F.A.C.P.
B. D. Walker, M.D.

DERMATOLOGY

W. M. Fraser, M.D., F.A.A.D.
D. W. Owens, M.D., F.A.A.D.

GENERAL & THORACIC SURGERY

Surgical Endoscopy & Colonoscopy
W. D. Seybold, M.D., F.A.C.S.
J. D. McMurrey, M.D., F.A.C.S.
J. L. Doggett, M.D., F.A.C.S.
M. F. Appel, M.D., F.A.C.S.

NEUROLOGY

R. R. Pierce, M.D., F.A.A.N.
W. R. Seybold, M.D.

OBSTETRICS & GYNECOLOGY

M. L. Cody, M.D., F.A.C.S., F.A.C.O.G.
W. A. Johnson III, M.D., F.A.C.O.G.

OCCUPATIONAL & PREVENTIVE MEDICINE

M. B. Johnston, M.D., F.A.C.Pr.M.
H. B. Elwell, Jr., M.D.
R. M. Fenno, M.D., F.A.C.P.
F. A. Goss, M.D.
W. R. Hawkins, M.D., F.A.C.Pr.M.
W. R. Hein, M.D.
L. A. Herrmann, M.D.
G. F. Kelly, M.D., F.A.C.Pr.M.
J. Mackay, M.D.
C. A. Owen, M.D., F.A.C.S.
C. G. Petry, M.D.
B. W. Prior, M.D., F.A.C.Pr.M.
N. A. Tadros, M.D., F.A.C.Pr.M.
A. M. Wyss, M.D., F.A.C.Pr.M.

OPHTHALMOLOGY

H. E. Wahlen, M.D., D.A.B.O.
J. E. Key, II, M.D.

ORTHOPEDIC SURGERY

R. A. Fulford, M.D., F.R.C.S. (C)
T. H. Crouch, M.D., F.A.C.S.

OTOLARYNGOLOGY

J. C. Dickson, M.D., F.A.C.S.
J. L. Smith, M.D., F.A.C.S.
L. P. Conrad, M.D.

PATHOLOGY

R. A. Jordan, M.D., F.A.S.C.P.

PEDIATRICS

Rheumatology
E. J. Brewer, Jr., M.D., F.A.A.P.

Allergy and Pulmonary Diseases
C. W. Ewing, M.D., F.A.A.P.

Gastroenterology
G. D. Ferry, M.D., F.A.A.P.

General Pediatrics and Consultation
F. J. Boland, M.D., F.A.A.P.
R. M. Thaller, M.D., F.A.A.P.
K. C. Pinckard, M.D.

PSYCHIATRY

C. G. Cochran, M.D.
R. Daichman, M.D.

RADIOLOGY

R. J. Kurth, M.D., F.A.C.R.
E. G. Linares, M.D.
P. Raphael, M.D.

UROLOGY

D. W. Pranke, M.D., F.A.C.S.
F. M. Fry, M.D.

DENTISTRY

J. W. Orr, D.D.S.
D. L. McClung, D.D.S.

SPEECH PATHOLOGY & AUDIOLOGY

D. R. Fox, Ph.D.
J. W. Porter, M.A.
N. Shulak, M.A.

EXECUTIVE DIRECTOR

J. A. Bakken, F.A.C.M.G.A.

K-S WEST

1111 Augusta Drive
Houston, Texas 77057
(713) 780-1661

K-S DOWNTOWN

Two Houston Center, Suite P-310
909 Fannin Street, Houston, Texas
77002 (713) 654-4401

Toxemia of pregnancy

Raymond B. Wait, MD; Clark M. Hinkley, MD; Angel Werch, MD

"Toxemia of pregnancy" is a designation that many people don't like. Most writers criticize the term because "toxemia" implies a circulating toxin, a circumstance certainly not demonstrated. On the other hand, "preeclampsia/eclampsia" and "pregnancy-induced hypertension" are cumbersome terms to describe the well-known syndrome of hypertension, edema, and proteinuria. Regardless of terminology, the condition is a hypertensive disorder, peculiar to and occurring usually after 24 weeks of pregnancy.

Toxemia is a major cause of maternal morbidity and fetal wastage. Primarily a disease of the young primigravida, the incidence varies widely among different patient populations. In private practice, figures approximating 1-2% are generally quoted; whereas rates as much as ten times higher may be found in some clinic populations. The reasons for this vast difference have not been definitely established, although the lower rate in private patients is frequently attributed to better nutrition, increased patient cooperation, and earlier attention to premonitory signs. Twins, molar pregnancy, chronic hypertension, and previous toxemia are conditions generally regarded as predisposing to increased incidence.

When discussing toxemia of pregnancy, it is customary to include two separate clinical entities: preeclampsia and eclampsia. Most authorities agree that the two conditions are identical in cause and pathophysiologic origin, differing only in severity and clinical manifestations. Since preeclampsia occurs far more frequently than eclampsia, the greater part of this article will deal with preeclampsia.

By definition, preeclampsia portends the development of hypertension, edema, or proteinuria, or a combination of these, in the latter months of pregnancy. This definition implies that the patient was normotensive before pregnancy. Blood pressure of 140/90 mm Hg is generally considered hypertensive, although absolute figures alone are not necessarily more important than a rising trend. A systolic rise of 30 mm Hg or a diastolic rise of 15 mm Hg is also clinically important. The amount of edema that is significant in preeclampsia is difficult to quantitate. Most studies agree it should be generalized in distribution, involving more than ankles and pretibial areas. Proteinuria means a urine protein concentration of more than 300 mg per liter, usually 1+ or 2+ on a dipstick measurement.

Preeclampsia is classified as severe if systolic pressure reaches 160 or the diastolic pressure reaches 110 mm Hg. Other signs of severe disease are proteinuria of 5 gm or more per day (4+), or a urine output of 400 ml or less per day. Some include visual disturbances, cyanosis, pulmonary edema, and epigastric pain as indices of severe disease. If none of the above is present, the preeclampsia is considered mild.

Cause and Pathophysiology

Toxemia of pregnancy remains a disorder without proven cause despite the extensive research the subject has generated. Since toxemia does not occur except during pregnancy, the products of conception, especially the placenta, have been studied extensively.[13,18] Diminished uterine blood flow has been demonstrated in preeclamptic patients.[1] Studies on experimental animals aimed at decreasing the uterine blood flow, however, have failed to produce the typical triad of hypertension, edema, and proteinuria. Placental in-

farcts have also been implicated, although studies have failed to reveal any consistent correlation.[8,16]

Two theories that have received a great deal of attention recently are altered vascular reactivity and disseminated intravascular coagulation. Vascular reactivity during normal and toxemic pregnancy has been the subject of numerous studies.[3,4,9,10,18,19] During normal pregnancy, blood volume increases, peripheral resistance decreases, plasma renin content increases, and vascular response to angiotensin diminishes. In patients with preeclampsia, on the other hand, blood volume decreases, the renin content declines, and the vasculature becomes more sensitive to pressor substances. Vasospasm is widespread, resulting in hypertension and leading to diminished blood flow and tissue hypoxia. Although these changes have been demonstrated in many patients with preeclampsia, there is no unanimity of opinion as to their significance, and different studies have produced conflicting results.

Slow intravascular coagulation has also been suggested as a possible etiologic factor in preeclampsia and eclampsia.[2,14] Diffuse fibrin deposition has been observed in various organs of patients with severe toxemia. Also, evidence has accumulated that some clot-promoting substance enters the maternal circulation resulting in changes similar to the generalized Schwartzmann reaction in experimental animals. Thrombocytopenia and increased platelet adhesiveness have been noted in preeclamptic patients and have been attributed to intravascular coagulation. The most important and as yet unanswered question in this regard is whether these alterations in the coagulation mechanism are significant causes of preeclampsia, or whether they merely represent incidental findings, resulting perhaps from some yet undiscovered common denominator.

Clinical Manifestations

Elevated blood pressure is the most reliable indication of developing preeclampsia, with the diastolic measurement being somewhat more important than the systolic as a prognostic sign. A diastolic rise of more than 15 mm Hg is significant, even though the pressure may not reach the hypertensive level. In general, the earlier in pregnancy the hypertension occurs, the more severe the disease is likely to become. Even in severe preeclampsia, however, the systolic pressure seldom rises above 200 or the diastolic above 110 mm Hg. Pressures in excess of these generally indicate underlying hypertensive vascular disease.

Sudden and excessive weight gain is a frequent finding.[6] In some patients, this may occur before elevated blood pressure is detected. Weight gain is due almost entirely to fluid retention, and the edema is generalized in distribution. Any weight gain of more than 0.9 kg (2 lb) per week after 24 weeks of gestation must be viewed with suspicion. Sudden weight gain due to fluid retention often occurs before visible signs of edema are present.

Proteinuria is an extremely variable finding in preeclampsia.[5] In general, proteinuria is the last of the three cardinal findings to develop and is viewed as a more serious sign than hypertension or edema. In mild states, proteinuria may not be present, whereas in more severe cases, massive amounts of protein may appear in the urine. The degree of proteinuria appears to be related to the severity of the

vasospasm affecting the renal vasculature.

Headache is not a common finding in mild preeclampsia. When it occurs, it frequently heralds the onset of more severe disease. Constant headache in a preeclamptic patient is a serious prognostic sign.

Visual disturbances, such as blurring or "spots before the eyes," are frequently mentioned as symptoms of preeclampsia. When they occur, they generally signify more advanced disease. Eyeground changes typical of preeclampsia include segmental arteriolar spasm and a retinal "sheen." Hemorrhages, exudates, and generalized arteriolar constriction usually indicate chronic hypertensive vascular disease.

An important diagnostic and prognostic test recently reported is the supine hypertension test or "rollover test."[11] At approximately 28 weeks of pregnancy, the patient is told to lie on her left side until the blood pressure stabilizes. She is then turned to the supine position and the pressure taken again. If this maneuver produces a rise of 20 mm Hg in the diastolic pressure, there is a significantly increased chance that preeclampsia will develop later.

Management

The primary aim in the management of preeclampsia is to prevent the development of convulsions and to permit the pregnancy to continue to certain viability, so long as the status of the mother remains stable and the intrauterine environment remains favorable for the fetus. Bed rest is the cornerstone of therapy for mild preeclampsia. A mild sedative, such as phenobarbital, helps keep the patient in bed and perhaps has some mild antihypertensive effect as well. Mild salt restriction is prescribed, and a fluid intake of approximately 2,500 ml is maintained. Having the patient lie on her left side has a beneficial effect on the glomerular filtration rate and subsequent urine output. The thiazide diuretics are of no proven value and may even be harmful.[15,17] Serious electrolyte depletion can result from their prolonged use, and severe thrombocytopenia has been reported in infants whose mothers had been given thiazide diuretics.

If the measures outlined herein are unsuccessful, the patient must be hospitalized. A blood pressure of 150/100 mm Hg or more is an indication for hospitalization. Absolute bed rest is required, with the patient lying on her left side. Sedatives and antihypertension drugs are administered for the patient who is not near enough to term to consider delivery and who has no evidence of neurologic hyperirritability. Phenobarbital, 30 mg four times daily, is generally sufficient. Hydralazine is an effective antihypertensive agent which is capable of lowering blood pressure without significantly decreasing renal blood flow.[12] Doses of 20-40 mg parenterally may be required several times daily as initial therapy. Oral antihypertensive agents such as methyldopa, 250-500 mg four times daily, are useful, but require several days before they become fully effective.

For the severely preeclamptic patient magnesium sulfate is the drug of choice, particularly if hyperreflexia is present. This drug can be given either intravenously or intramuscularly. We prefer the intravenous route, using a 10% solution. A loading dose of 4 gm is given over a period of 10-15 minutes. This is followed by a con-

tinuous intravenous drip, adjusted to deliver approximately 1 gm per hour. Comparable doses may be given intramuscularly utilizing a 50% solution. However, magnesium sulfate is extremely irritating when injected intramuscularly, and a small amount of local anesthetic should be mixed with the drug. The recommended dosage can be continued safely as long as an active knee jerk is present and if the urine output is at least 40 ml per hour.

The management of the patient with severe preeclampsia is essentially the same as that of the patient with severe preeclampsia. The aims of therapy are to combat convulsions, relieve the vasospasm, and increase urine output. Intravenous administration of magnesium sulfate generally stops convulsions promptly and has a favorable effect in lowering blood pressure. If the diastolic pressure remains above 100 mm Hg, hydralazine is given intravenously. A loading dose of 20 mg is followed by a continuous infusion, titrated to deliver approximately 10 mg per hour. The infusion is slowed or stopped when the diastolic pressure drops below 100 mm Hg.

If oliguria (urine output less than 20 ml per hour) is associated with eclampsia or severe preeclampsia, mannitol, intravenously, is generally used. A dose of 12.5 to 25 gm can be given over a period of 5-10 minutes. If repeated doses of mannitol are required, the central venous pressure should be carefully monitored to prevent overloading the circulation.

Timing of Delivery

Since termination of pregnancy is the only known cure for toxemia, the timing of delivery is of paramount importance in the management of preeclampsia or eclampsia.[7] The patient with mild preeclampsia presents no great problem. If bed rest and sedation are successful in halting the progress of the disease, the pregnancy may be allowed to continue to term, or at least until fetal maturity is assured. In patients with severe disease, however, the timing of delivery is vital.

Termination of pregnancy is based on the need to prevent or control convulsions in the mother, and to prevent the damage or death of the fetus in utero. If maternal disease remains uncontrolled, as indicated by rising blood pressure, falling urine output, or repeated convulsions, the uterus must be emptied, regardless of fetal maturity. In somewhat less severe disease, assessment of the fetoplacental status may be of value when the fetus is premature. Measurement of urinary or plasma estriol, plasma heat-stable alkaline phosphatase, and human placental lactogen gives indication of fetal status. In addition, the oxytocin challenge test is receiving increasing use to detect those patients in whom placental dysfunction has progressed to the point of fetal distress. A very difficult decision must be made when one is faced with the problem of positive evidence of placental dysfunction in the presence of fetal immaturity. Most authorities believe, however, that even the premature infant has a better chance of survival in a nursery environment in such an instance.

The method chosen for delivery should be that of least trauma for both mother and infant. If the condition of the cervix is favorable and no obstetrical contraindication exists, induction of labor by amniotomy and oxytocin infusion may be attempted. It should be remembered, however, that babies already compromised by maternal disease do not tolerate long induc-

tions well. In many cases, cesarean section should be done promptly. In our experience, the cesarean section rate for patients with severe toxemia of pregnancy is approximately 45%. Pudendal or regional anesthesia is generally used for vaginal deliveries; whereas a balanced general anesthetic is preferred for cesarean sections.

This review article was prepared for *Texas Medicine* through the cooperation of Fred M. Taylor, MD, director, Office of Continuing Education, Baylor College of Medicine, Houston.

References

1. Assali NS, Douglass RA, Baird WW, et al: Measurement of uterine blood flow and uterine metabolism with the N^2O method in normotensive and toxemic pregnancies. Clin Res Proc 2:102-103, 1954.

2. Beecham JB, Watson WJ, Clapp JF 3rd: Eclampsia, preeclampsia, and disseminated intravascular coagulation. Obstet Gynecol 43:576-585, 1974.

3. Brown JJ, Davies DL, Doak PB, et al: Plasma-renin in normal pregnancy. Lancet 2:900-901, 1963.

4. Brown JJ, Davies DL, Doak PB, et al: Plasma renin concentration in the hypertensive diseases of pregnancy. J Obstet Gynecol Brit Comm 73:410-417, 1966.

5. Chesley LC: Variability of proteinuria in hypertensive comolications of pregnancy. J Clin Invest 18:617-620, 1939.

6. Chesley LC: Weight changes and water balance in normal and toxic pregnancy. Am J Obstet Gynecol 48:565-593, 1944.

7. Cosgrove SA, Chesley LC: Management and treatment of late toxemias of pregnancy. Am J Obstet Gynecol 51:67-74, 1946.

8. Dieckmann WJ: The toxemias of pregnancy, 2nd ed. St. Louis, CV Mosby, 1952.

9. Eastman NJ: Vascular factor in toxemias of late pregnancy. Am J Obstet Gynecol 34:549-557, 1937.

10. Gant NF, Chand S, Whalley PJ, et al: The nature of pressor responsiveness to angiotensin II in human pregnancy. Obstet Gynecol 43:854, 1974.

11. Gant NF, Chand S, Worley RJ, et al: A clinical test useful for predicting the development of acute hypertension in pregnancy. Am J Obstet Gynecol 120:1-7, 1974.

12. Grody MH: Antihypertensive drugs in toxemia: a practical integrated plan of management. Obstet Gynecol 13(2):166-174, 1959.

13. Kumar D: Chronic placental ischemia in relation to toxemias of pregnancy: a preliminary report. Am J Obstet Gynecol 84:1323-1329, 1962.

14. McKay DG: Clinical significance of the pathology of toxemia of pregnancy. Circulation 30 Suppl 2:66-75, 1964.

15. Pritchard JA, Walley PJ: Severe hypokalemia due to prolonged administration of chlorothiazide during pregnancy. Am J Obstet Gynecol 81:1241-1244, 1961.

16. Shanklin DR: The human placenta with especial reference to Infarction and toxemia. Obstet Gynecol 13(2):325-336, 1959.

17. Shoemaker ES, Gant NF, Madden JD, et al: The effect of thiazide diuretics on placental function. Tex Med 69:109-115, 1973.

18. Sims EA: Preeclampsia and related complications of pregnancy. Am J Obstet Gynecol 107:154-181, 1970.

19. Zuspan FP: Acute hypertension in pregnancy. Contemp Ob/Gyn 1:27, 1973.

The authors, Department of Obstetrics and Gynecology, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030.

TO ALL MY PATIENTS
I invite you to discuss frankly with me any questions regarding my services or my fees.
The best medical service is based on a friendly, mutual understanding between doctor and patient.
AMERICAN MEDICAL ASSOCIATION

Do Your Patients Understand Your Fees?

Patients hesitate to ask about fees. But they **want** to know. They naturally worry about what their medical costs will be. And if they don't feel free to talk about it, serious problems—misunderstanding, resentment and even deep hostility—can arise, threatening the all-important rapport between you and your patients.

Open discussion **before** treatment prevents such embarrassing problems. It paves the way for mutual understanding and good will.

An AMA Fee Plaque, prominently displayed in your waiting room, serves as an open invitation for your patients to discuss medical costs and financial problems with you. It shows that you care. Just seeing the message can give many financially worried patients peace of mind.

The AMA Fee Plaque works hard to prevent doctor-patient misunderstandings. And it works well.

Suitable for wall or desk display, the plaque measures 6″ x 10½″. The lettering is white on a dark brown background and the frame is durable beige plastic.

How do you obtain one?

Just mail the coupon below and your check, or money order, for $2.40 (postage paid). Your Fee Plaque will be sent to you by return mail.

Order Department
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610

Please send me_____A.M.A. fee plaques, offered at only $2.40 each. Enclosed is my check or money order for $_____.

Name_____

Address_____

City_____ State_____ Zip Code_____

An otologic-audiologic approach to aural rehabilitation

A number of otolaryngologists have begun to dispense hearing aids in their program of patient care. This article discusses some of the aspects of a private practice aural rehabilitation program that includes the dispensing of hearing aids under the supervision of the otolaryngologist.

There are two major reasons why this clinic began its own complete aural rehabilitation program. We desired to control all procedures involved in selecting the appropriate amplification for our patients. Secondly, we felt a need to insure adequate follow-up with our patients. Proper and adequate hearing aid orientation counseling often is the key factor in successful patient adjustment to amplification.

A patient entering the clinic with a complaint of hearing difficulty is given a full otolaryngological examination. Next, an audiological evaluation is performed. This includes determination of air and bone conduction thresholds, speech discrimination, and acoustic impedance measurements. Further diagnostic audiometry is performed if abnormalities proximal to the cochlea are suspected.

The results of the otological and audiological evaluations are discussed with the patient. If the patient has a hearing loss, its impact on his communication ability is thoroughly discussed. If the patient is a candidate for amplification, he is offered the opportunity to participate in the clinic's aural rehabilitation program. Questions involving the program and its costs are answered. Further counseling may be provided in an attempt to prepare the patient and his family for the adjustment problems which they may face in the future.

After the counseling session the audiologist makes the impression for a custom made earmold or selects an appropriate fitting stock earmold and begins a complete comparative hearing aid evaluation. In the evaluation sound-field measurements of speech reception, speech discrimination, most comfortable loudness levels, and thresholds of discomfort are made employing a variety of different makes and models of hearing aids. Otometric plotting is occasionally used to establish discrete frequency sound pressure level requirements.

A basic purpose of the evaluation is to determine the feasibility of obtaining significant improvement in the patient's communication ability through the use of amplification. Furthermore, the evaluation is designed to establish the characteristics of frequency response, gain, output, output limitation, microphone design, and earmold design which provide maximum enhancement of the individual's auditory communication capabilities.

The selected hearing aid is dispensed approximately three to four days after completion of the hearing aid evaluation. At this time the patient receives thorough hearing aid orientation counseling. This includes instruction regarding the function, care, and use of the hearing aid. The patient is then allowed to take the aid home and evaluate it in the nontest environment. Another visit is scheduled for the following week. At that time any needed hearing aid or earmold adjustments are made. Additional objective sound field measurements are made at this time to evaluate the aid's performance. Electro-acoustic measurements are also made on the aid using a hearing aid test box, to determine gain,

Ernest C. Butler, MD
Paul Burns, MD
John R. McFarlane, MD
Scott Haug, MA
William A. Rudolph, MA

frequency response, maximum output, and harmonic distortion of the hearing aid. Finally, the patient and audiologist discuss listening experiences that the patient has encountered in the past week. A second follow-up visit is scheduled in one week to make any further comments on adjustments, or make any necessary changes in the hearing aid earmold system. At this time specific counseling is begun to discuss speech reading and auditory training techniques which may enable the patient to increase his communicative skills.

Following these sessions, the audiologist discusses the rehabilitation program, and the patient is given the opportunity to purchase the hearing aid. If he or she is not satisfied, the hearing aid may be returned. The cost of the program to the patient is based on the manufacturer's cost, plus an overhead factor, and charges for professional services rendered by the otologist and audiologist. If the aid is returned, the patient is only obligated to pay for the hearing aid evaluation, the earmold, and the rehabilitative counseling offered by the otologist and audiologist.

Our patients have responded favorably to our program. We find that the patient appreciates the entire rehabilitation program being handled at one facility. Also we have found that patients react favorably to the professional management that they receive from the initial otologic examination through the follow-up training sessions. Finally, we feel enthusiastic about the complete follow-up care that we are providing and the continual feedback that we receive from our patients regarding their rehabilitation progress. In this way we are assured that our patients achieve full benefit from the hearing aid.

A great deal of success has been achieved with a variety of approaches in the dispensing of hearing aids. However, we feel that the patient receives maximum benefit when the physician and audiologist work together to provide a complete aural rehabilitation program.

The authors, Medical Park Tower, Suite 401, 1301 West 38th St, Austin, TX 78705.

Malignant external otitis

Vincent G. Caruso, MD; Ceri M. Griffiths, MD; Byron J. Bailey, MD

Malignant external otitis, a necrotizing infection caused by *Pseudomonas aeruginosa*, occurs in the diabetic patient and carries a mortality of 50%. Early diagnosis and aggressive treatment are necessary to decrease its mortality and morbidity. Treatment must be aggressive and should include systemic antibiotics that are effective against *Pseudomonas*, surgical debridement, and topical antibacterial agents.

Malignant external otitis, a necrotizing infection of the external auditory canal, invariably occurs in overt or subclinical diabetic patients who are particularly vulnerable to the infecting organism, *Pseudomonas aeruginosa*. This disease was first described by Chandler in 1968[1]; its seriousness is underscored by the fact that 7 of his 13 patients died.

In malignant external otitis, *Pseudomonas* invades the external auditory canal epithelium, subcutaneous fascia, periosteum, perichondrium, cartilage and bone, blood vessels, nerves, and surrounding soft tissue, including the parotid gland. The infection may involve the soft tissue over the mastoid in the postauricular area, the parotid gland and facial nerve in the anterior auricular area, or the soft tissue about the stylomastoid foramen beneath the auricle. If the infection travels to the base of the skull, involvement of the 5th, 7th, 9th, 10th, 11th, and 12th cranial nerves may occur from inflammation at their respective foramina. Intracranial extension may proceed via this route. This infection may also invade the middle ear and mastoid air cell system from the external auditory canal. It may cause destruction of the tympanic membrane and ossicles and follow the mastoid air cell system to the petrous apex, causing intracranial involvement and death. With early diagnosis and vigorous medical and surgical treatment, the mortality from malignant external otitis has decreased from more than 50%[1] to 31%.[2] However, the mortality rate is still 50% in patients with facial nerve paralysis and 80% in patients with multiple cranial nerve palsies.[3-5]

This article, based on the case presentations of three patients with malignant external otitis, will illustrate the importance of early diagnosis and treatment.

Applied Anatomy

The external auditory canal extends about 2.5 cm from the auricle to the tympanic membrane. The inner two-thirds of the canal consists of thin squamous epithelium and subcutaneous tissue applied directly to the periosteum. This part of the external canal is supported by the tympanic bone, while the outer one-third, supported by cartilage, contains thicker skin as well as sebaceous glands, ceruminous glands, and hair follicles. Santorini's fissures pass through the cartilaginous floor of the external auditory canal. The facial nerve exits from the stylomastoid foramen near the floor of the external auditory canal. The parotid gland and temporomandibular joint lie anterior and adjacent to the external auditory canal. Lying in the base of the skull within reach of an infection beginning in the area of the external auditory canal are the jugular foramen, carrying the 9th, 10th, and 11th cranial nerves, the hypoglossal canal, carrying the 12th cranial nerve, and the foramen ovale, carrying the mandibular branch of the trigeminal nerve. The tympanic membrane, middle ear, and ossicles, which are medial to the external au-

ditory canal, are within reach of a necrotizing external ear infection. The mastoid air cell system may be infected by ascending infection from the middle ear or by invasion of the bone of the mastoid cortex overlying the mastoid cells. Mastoiditis may then extend from the mastoid air cell system to the petrous apex and enter the middle or posterior cranial fossa.

Bacteriology

The organisms cultured from the external auditory canal in normal ears include *Staphylococcus albus* and diphtheroids.[6] In external otitis, the most commonly cultured organisms include *Staphylococcus aureus,* streptococcus, *Pseudomonas aeruginosa, Bacillus pyocyaneous, Proteus, Aerobacter,* and *Escherichia.*[6] Seventy percent of patients with ear infections present with a mixed bacterial flora.[6] Although *P aeruginosa* does not thrive in normal ears, even after liberal inoculation,[7] it is invariably cultured from the ears of patients with malignant external otitis.[2]

Pseudomonas characteristically produces a necrotizing perivasculitis in small vessels; diabetes characteristically produces endarteritis. Together, these two entities may explain the particular susceptibility of diabetic patients to a *Pseudomonas* infection. This infection may (1) destroy the surrounding soft tissue structures, including the parotid gland and temporomandibular joint, cartilage and bone[8]; (2) invade the base of the skull, destroying the cranial nerves as they exit from their foramina; (3) destroy the facial nerve within the fallopian canal of the temporal bone[9]; and (4) advance through the middle ear and mastoid air cell system to the petrous apex, causing multiple cranial nerve palsies, meningitis, and death.[10]

Diagnosis

Malignant external otitis is diagnosed in diabetic patients presenting with ear pain and discharge and polyps or granulation tissue in the external auditory canal with or without cellulitis or parotitis. Facial nerve or other cranial nerve palsies is a poor prognostic sign. *Pseudomonas* is invariably found on culture.

Medical Treatment

The cornerstone of medical management for this disease is careful control of the diabetes mellitus.

The systemic antibiotics found to be most useful in malignant external otitis are carbenicillin, gentamicin, and colistimethate. These three antibiotics are effective against most *Pseudomonas* organisms causing malignant external otitis. Carbenicillin is a semisynthetic penicillin with low toxicity that may be given intravenously in doses of 20 to 30 gm per day. Resistant strains of *Pseudomonas* are often a problem,[11-13] and this drug must be used in combination with other antibiotics. Bleeding tendencies from platelet dysfunction have been reported in patients taking carbenicillin.[14] However, this is the least toxic of the three drugs. Gentamicin is an aminoglycoside that is very effective against *Pseudomonas* in doses up to 5 mg per kilogram of body weight per day given intravenously three times a day. Since gentamicin is both nephrotoxic and ototoxic,[15] renal function and hearing must be monitored closely before and during treatment. It is synergistic *in vitro* and *in vivo* when used with carbenicillin.[16] Colistimethate (polymyxin), a polypeptide that is also effective against *Pseudomonas,* may be given intramuscularly twice a day in doses of up to 5 mg per kilogram of body

weight per day. Colistimethate is both ototoxic and neurotoxic, and superinfection occasionally poses a problem.

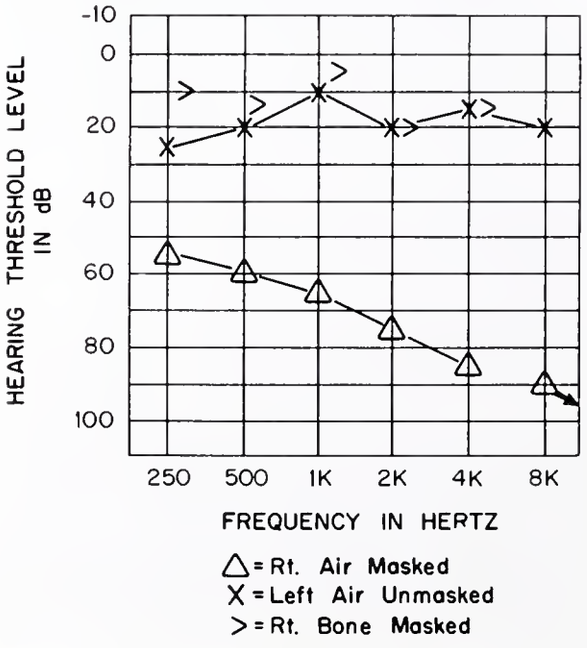
Surgical Treatment

Aggressive surgical management is usually necessary to decrease the morbidity and mortality of malignant external otitis. If the external auditory canal and surrounding soft tissue and bone are involved, these areas will probably respond best to aggressive debridement. In patients whose middle ear and mastoid air cell system is affected, radical mastoid surgery is necessary. Each case must be evaluated individually regarding surgical treatment.

Case Reports

Case 1: A 46-year-old woman presented with a three-week history of pain in the right ear, drainage, and hearing loss. She had polyps in her right external auditory canal and a conductive hearing loss (Fig 1). In the course of six weeks, she made 13 visits to the clinic. Though treatment included several different regimens for external otitis and four separate polypectomies, the symptoms worsened progressively. The patient's ear pain, which became quite severe, finally required Demerol tablets for control. When admitted to the hospital, she was found to have diabetes mellitus with a fasting blood sugar level of 452 mg/100 ml. *P aeruginosa* was cultured from her external auditory canal. The diagnosis of malignant external otitis was made. A right radical mastoidectomy was performed. At that time, the infection was found to have extended through the cartilage of the external auditory canal into the surrounding soft tissue and parotid gland surrounding her external auditory canal. Granulation tissue was present in the middle ear space and the mastoid cavity (Fig 2). The malleus, incus, and tympanic membrane were absent. For two weeks, the patient was treated with gentamicin and carbenicillin. Her diabetes was controlled with NPH insulin, 100 units daily, and diet. Despite vigorous treatment as an outpatient, she presented two months later with a two-week history of right ear pain and discharge. She was readmitted to the hospital with recurrent malignant otitis. Her external auditory canal and mastoid cavity were again filled with granulation tissue. A revision mastoidectomy and meatoplasty were performed. Her diabetes, again out of control, was controlled with NPH insulin and diet. During the next three months she did well with no apparent recurrence of her infection. Then, three months later, she presented with perichondritis of her right auricle and uncontrolled diabetes. The

1. This audiogram shows the conductive hearing loss in the right ear of the patient discussed in case 1. This hearing loss was caused by the granulation tissue in her external auditory canal, the absence of the tympanic membrane, malleus, and incus, and her middle ear disease.

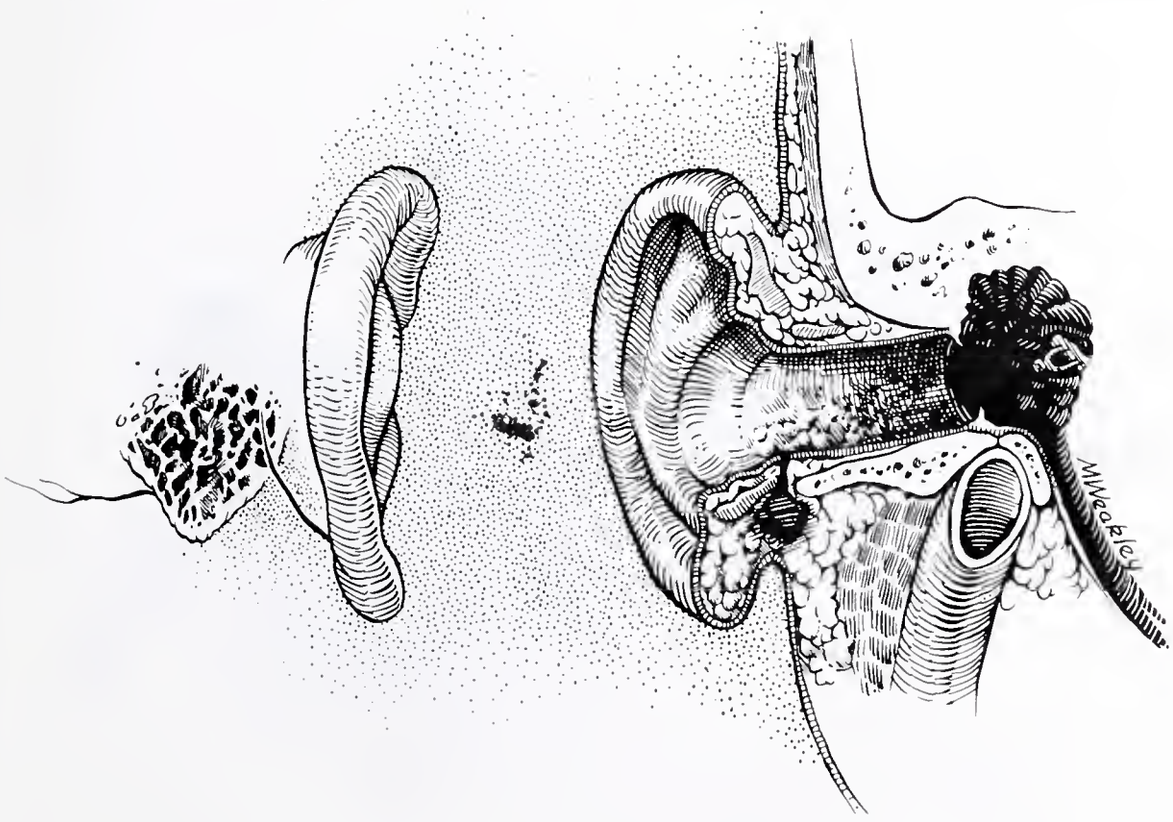


cartilage of her auricle was debrided, and the diabetes was again controlled. At that time, no systemic antibiotics were administered; she was treated with acetic acid soaks to her right auricle. She has done well and has had no recurrent symptoms for one year.

Comment: This patient, an unsuspected diabetic, presented with the characteristic signs of malignant external otitis; pain, discharge, and granulation tissue in her external canal. Although the diagnosis was delayed six weeks, the patient responded well to aggressive medical and surgical management. In this case, the disease, which involved the external canal, surrounding soft tissue, the middle ear, middle ear bones, and mastoid air cell system, required mastoid surgery as well as wide local debridement of the external auditory canal and surrounding soft tissue.

Case 2: The patient was a 74-year-old man who had been diabetic for 17 years and was taking 25 units of NPH insulin daily. He presented with a three-month history of pain in the left ear and drainage, which had been unresponsive to the usual treatment for external otitis. Examination revealed granulation tissue on the posterior wall of his left external auditory canal and a purulent discharge that grew *Pseudomonas aeruginosa* on culture. Mastoid x-rays revealed haziness in his left mastoid bone, and his audiogram revealed a conductive hearing loss in his left ear. The diagnosis was malignant external otitis. He was admitted to the hospital and treated with intravenous administration

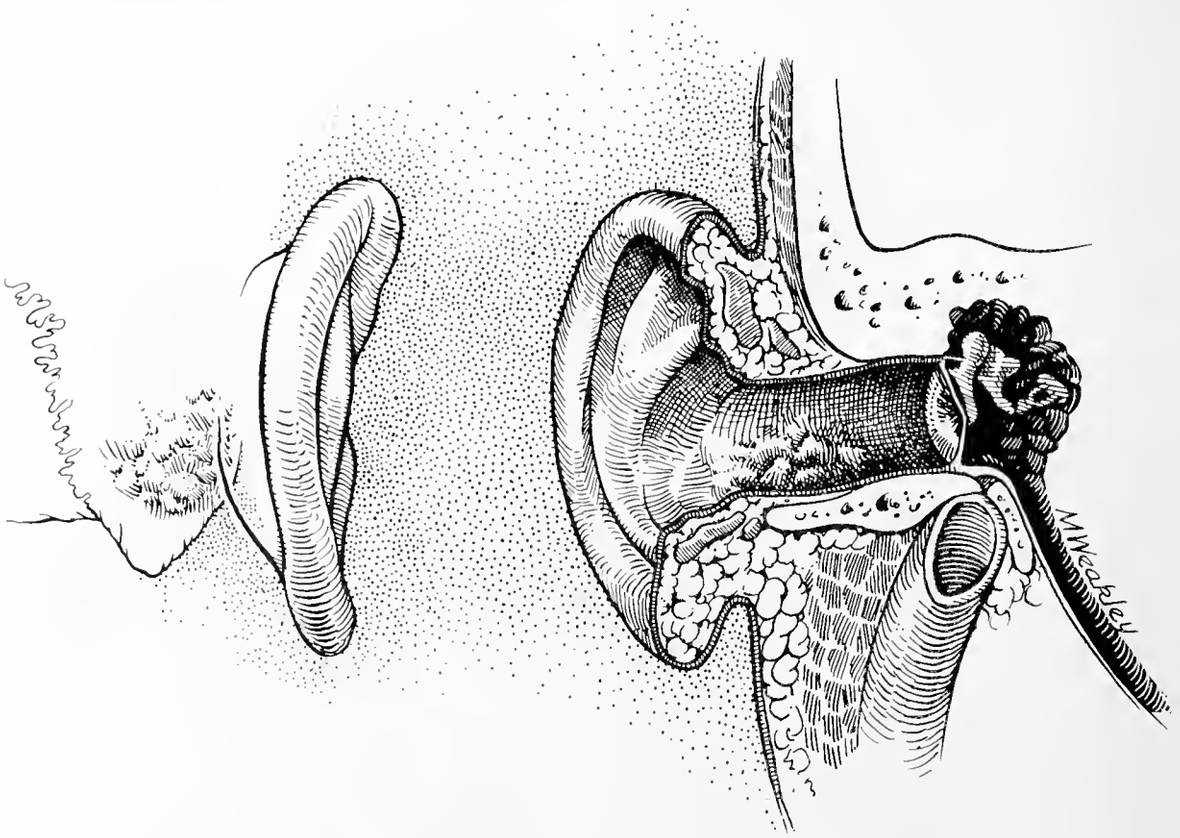
2. Case 1. Note the granulation tissue in the external auditory canal, the fistula through the cartilage of the canal into the parotid gland, the absent tympanic membrane, incus, and malleus, and the disease-filled middle ear and mastoid.



of gentamicin and carbenicillin for 21 days. Radical debridement of the soft tissue surrounding his external canal was performed through a postauricular incision. A large abscess over the mastoid process of the temporal bone was draining into the external auditory canal and causing some erosion of the cortical bone, but his mastoid air cells were intact (Fig 3). On the seventh postoperative day, he was discharged and had no pain. Gentamicin and carbenicillin were administered at home by a nurse. On the 20th postoperative day, the patient was readmitted for further debridement of granulation tissue in his external canal and treatment with gentamicin, given intramuscularly. Discharged on a regimen of acetic acid irrigations, he has required a subsequent readmission, wide surgical debridement, and antibiotic administration. He is symptom-free 18 months later.

Comment: This patient had malignant external otitis for three months and presented with an abscess over his mastoid process. Although he responded to vigorous medical and surgical treatment, he did require a second and third admission for additional surgery and antibiotic therapy. He is presently being treated as an outpatient.

Case 3: A 75-year-old man presented with a two-month history of pain in the left ear and drainage, and a three-week history of severe left frontal headaches. Examination revealed granulation tissue on the floor of his left external auditory canal, an intact tympanic membrane, a de-



3. Case 2. Note the granulation tissue in the external auditory canal and the abscess in the soft tissue over the mastoid.

creased left corneal reflex, tongue deviation to the left, and weakness of the left facial nerve. He was also unsteady and had abnormal tandem Romberg test results. Audiogram revealed a bilateral mixed hearing loss with a speech reception threshold of 60 db in the left ear. He was admitted with a diagnosis of diabetes mellitus, malignant left external otitis, left 5th, 7th, and 12th cranial nerve paresis, and possible cerebellar abscess. Four of his five fasting blood sugar values were elevated at admission. Ear culture revealed *aeruginosa,* and mastoid x-rays showed a haziness on the left. Tomograms of his temporal bone revealed erosion of the inferolateral wall of the left external auditory canal. Brain scan showed increased tracer in the area in the left cerebellar hemisphere. EMI scan showed a radiolucent area in the left petrous bone with slight displacement of the fourth ventricle to the right. He also had slight corticocerebral atrophy. His spinal fluid was clear with a normal pressure, and contained 2 white blood cells per high-powered field. His glucose value was 11 mg/100 ml and protein was 43 mg/100

4. Case 3. The facial, hypoglossal, and mandibular nerves and parotid gland shown here were all affected by the infection extending along the base of the skull.

ml. A regimen of carbenicillin and gentamicin was prescribed, and a left simple mastoidectomy was performed on the day following admission. Debridement of his external auditory canal revealed a fistulous tract from his external canal into his parotid gland, with parotitis and involvement of the soft tissue under the floor of the external auditory canal (Fig 4). His tympanic membrane was intact, with clear fluid in the middle ear space. Although his mastoid cells were normal, a complete simple mastoidectomy was performed to search for a tract of infected cells leading to the petrous apex; no such tract of cells was found. It appeared that the multiple cranial nerve palsies occurred through involvement of the nerves at the base of the skull in the area of their foramina. Postoperatively, the pain disappeared. The patient was discharged on the 15th postoperative day to continue intramuscular injections of gentamicin. Four months later, his external auditory canal was completely free of infection. His brain scan and EMI scans were normal, and he had improvement in his 5th, 7th, and 12th cranial nerve function. Although he has had bilateral serous otitis media, he has had no further evidence of malignant external otitis

Comment: This patient presented with malignant external otitis and early multiple cranial nerve palsies. He was treated aggressively, both medically and surgically, and responded well. His quick response to therapy may be related to the mildness of his diabetes, in other words, his subclinical diabetic state, which had been well controlled on diet alone.

Discussion

These three cases demonstrate the variety of presentations of malignant external otitis and the virulence with which this infection may progress. The first patient had involvement of the external canal, surrounding soft tissue, the middle ear, and mastoid. The second patient had involvement of the external auditory canal and an abscess overlying the mastoid process. The third patient had involvement of the external auditory canal extending into the surrounding soft tissue and along the base of the skull, causing multiple cranial nerve palsies. All three patients responded to aggressive medical and surgical management. As noted, multiple admissions and debridements are often necessary for treatment of malignant external otitis. Adequate control of diabetes is the cornerstone of medical treatment. This disease is indeed malignant in that it has the potential to kill the patient. Therefore, early diagnosis and vigorous management are essential to decrease its high morbidity and mortality.

References

1. Chandler JR: Malignant external otitis. Laryngoscope 78:1257-1294, 1968.

2. Chandler JR: Malignant external otitis and facial paralysis. Otolaryngol Clin North Am 7:375-383, 1974.

3. Chandler JR: Pathogenesis and treatment of facial paralysis due to malignant external otitis. Ann Otol Rhinol Laryngol 81:648-658, 1972.

4. Cohn AM: Progressive necrotizing otitis. Malignant external otitis. Arch Otolaryngol 99:136-139, 1974.

5. Aldous EW, Shinn JB: Far advanced malignant external otitis: report of a survival. Laryngoscope 83:1810-1815, 1973.

6. Saunders WH, Suie T, Sroufe SA: The microflora and the treatment of external otitis and otitis media. Postgrad Med 25(2):176-179, 1959.

7. Perry ET: The human ear canal. Springfield, Ill, Charles C Thomas, 1957, p 49.

8. Meltzer PE, Kelemen G: Pyocyaneous osteomyelitis of the temporal bone, mandible and zygoma. Laryngoscope 69:1300-1316, 1959.

9. Morgenstein KM, Seung HI: *Pseudomonas* mastoiditis. Laryngoscope 81:200-215, 1971.

10. Schwarz GA, Blumenkrantz MJ, Sündmaker WL: Neurologic complications of malignant external otitis. Neurology (Minneap) 21:1077-1084, 1971.

11. Darrell JH, Waterworth PM: Carbenicillin resistance in *Pseudomonas aeruginosa* from clinical material. Br Med J 3:141-143, 1969.

12. Lowbury EJ, Lilly HA, Kidson A, et al: Sensitivity of *Pseudomonas aeruginosa* to antibiotics: emergence of

strains highly resistant to carbenicillin. Lancet 2:448-452, 1969.

13. Marks MI, Eickhoff TC: Carbenicillin: a clinical and laboratory evaluation. Ann Intern Med 73:179-187, 1970.

14. McClure PD, Casserly JG, Monsier C, et al: Carbenicillin-induced bleeding disorder. Lancet 2:1307-1308, 1970.

15. Meyers RM: Ototoxic effects of gentamicin. Arch Otolaryngol (Chicago) 92:160-162, 1970.

16. Smith CB, Dans PE, Wilfert JN, et al: Use of gentamicin in combinations with other antibiotics. J Infect Dis 119:370-377, 1969.

The authors, Department of Otolaryngology, The University of Texas Medical Branch, Galveston, TX 77550.

Reprint requests to Dr Caruso.

Information for authors

Texas Medicine is a scientific, clinical journal published primarily for members of the Texas Medical Association. In addition, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, coming meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Scientific Articles

Manuscripts should be typed double-spaced with ample margins on firm paper. Two copies should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

References

Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrative Material

Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously Published Material

Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with the manuscript.

Editorials

Editorials should be prepared in the same general manner, and should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the Managing Editor and consultants.

News

News items should be sent to the Editorial Offices, 1801 North Lamar Blvd., Austin 78701.

Continuing Education, Meetings

Continuing education courses and medical meetings are listed in each issue. Information about courses should include title, sponsor, location, dates, duration, fee, how many may enroll, for whom the course is designed, teaching methods, type and number of hours credit, and name and mailing address of a person to contact.

Information about meetings should include the name of the organization, place and inclusive dates, and name and mailing address of a person to contact. Program topics and names of speakers may be included as space permits.

Material should be submitted in writing six weeks before publication; for example, information for the June issue (published June 1) is needed by April 15.

Obituaries

Obituaries of deceased TMA members are published if adequate information is received within four months of date of death. When notifying the editors of a member's death, please give the name and address of next of kin.

Policy on Columns

Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Scientific Publication Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the Committee and the editors will consider development of a column.

Editing

All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints

Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright

Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the Managing Editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

Point of View

Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

MEDICINE AND THE LAW

COURTS AFFIRM LIMITS ON SCOPE OF MEDICAL EXPERT TESTIMONY

Texas Courts of Civil Appeals have discussed the proper scope of expert testimony in a malpractice suit[1] in two recent cases.

Facts

In *Burks v. Meredith* the patient alleged that the defendant family practitioner was negligent in the manner in which he performed surgery and in failing to consult a specialist.

The patient had been shot in the lower abdomen. His family physician, who was experienced in abdominal surgery, operated, found that the bullet had penetrated the colon, and performed a primary closure.

Post-operatively a total obstruction occurred, and during the second surgery to relieve adhesions, the suture line on the colon opened.

A surgical specialist was called, but the colon tore open during attempted exteriorization by the specialist. Abdominal infection and death followed.

In the trial the plaintiff presented deposition testimony by the specialist to the effect that, although the defendant doctor performs standard operations (hysterectomies, appendectomies, etc.) "excellently," he "doesn't have the broad surgical mind to be able to make judgments and to be able to make decisions about complicated surgical problems."

Ruling

The trial judge refused to allow the jury to hear the specialist's opinion and similar evidence on the grounds that such testimony would be unduly prejudicial and invade the province of the jury.

The jury returned a verdict for the defendant. Judgment has been affirmed by the Waco Court of Civil Appeals. The plaintiff's appeal to the Texas Supreme Court is pending.

Facts

In *Lee v. Andrews,* following a hemorrhoidectomy by the defendant family practitioner, the patient was catheterized and complications developed.

The fourth day after surgery the defendant consulted with a specialist and transferred the patient to a hospital in a larger city. There, the patient was diagnosed as having cellulitis and septicemia with accompanying shock, resulting in his death the next day.

In trial, the plaintiffs contended that the defendant doctor was negligent in not diagnosing and treating the patient's infection earlier and in failing to consult a specialist at an earlier time.

Two expert witnesses appeared for the plaintiffs, basing their testimony upon review of the records (medical, autopsy, depositions).

A Texas general surgeon testified that there was "ample evidence to suggest earlier treatment and referral;" that his conclusion was that " 'malpractice' was committed, at least timely treatment was not awarded . . . and errors had been made which went unrecognized, untreated even though they were obvious"; that treatment and urologic consultation should have occurred sooner; and that the defendant doctor should have performed an indwelling catheterization following scrotal swelling. The other plaintiff expert witness, a New York pathologist, testified that the patient

should have had a urologic examination three or four days sooner than he did.

The court construed this testimony by both experts as stating "in effect, that Doctor Lee was wrong in the way he treated Andrews."

The New York pathologist additionally testified concerning causation that, in his opinion and based upon reasonable medical probability, "had timely treatment been instructed . . . or early referral, there would have been survival for Mr. Andrews."

Ruling

The trial court overruled the defendant's objections to this testimony. Upon a verdict for plaintiffs, judgment was rendered against the defendant doctor and affirmed by the Amarillo Court of Civil Appeals.

The defendant's appeal to the Texas Supreme Court is pending.

Discussion

Appellate rulings on negligence testimony in both cases are alike. In a malpractice suit against a doctor, an expert witness physician can and should give testimony about applicable "standards" of care, but not express opinions to the effect that the defendant doctor committed malpractice or as to what conduct would be expected of a hypothetical doctor similarly situated. This form of "negligence" testimony is inadmissible.[2]

The *Lee* case involves an additional point relating to admissibility of "causation" testimony. Although such testimony must be expressed in terms of reasonable medical probability, a medical expert may express a direct opinion as to whether the defendant doctor's conduct was, or was not, a cause of the patient's injury or death.

To recover against a physician, a patient must show that the diagnosis or treatment complained of was such as to constitute negligence and that it was a proximate cause of the plaintiff's injuries or death.

In general, both these elements are fact questions and under the Anglo-American system of jurisprudence are to be decided by the trier of facts, usually a jury.

In most situations, Texas law not only permits, but requires, expert testimony to be presented on both of these questions. The rationale is that jurors do not have the requisite expertise to pass upon issues of medical negligence and causation.

The *Burks* and *Lee* cases address the form that testimony by expert witness physicians may take regarding these questions. As to medical negligence, both appellate courts recognized that the Texas Supreme Court[3] has imposed protective restrictions on the type of expert testimony that is admissible.

Thus, a physician witness cannot express an opinion as to what constitutes "malpractice" or "negligence," nor as to "what a reasonable and prudent doctor would have done under the same or similar circumstances." It is the province of the jury to decide this ultimate negligence issue, and testimony to this effect, in form or substance, should be excluded.

Permissible testimony by physician witnesses relative to medical negligence

should be couched in terms of applicable "standards" of care and medical practice under the circumstances. In addition to "standards" testimony, the jury should hear evidence from appropriate witnesses about what the defendant doctor actually did or failed to do.

The same dangers of undue emphasis and invasion of the jury's province are present in allowing expert medical witnesses to express a direct opinion as to medical causation.

However, Texas courts have concluded that the jury's need for such testimony in order to reach a just decision, outweighs the dangers. In this regard, the Texas Supreme Court has held that the trier of fact can determine causation when common sense shows causal relation; when scientific principles, provided by expert testimony, show the causal link; and when causation is shown by expert testimony.[4]

In a malpractice case the evidence must show at least a reasonable probability that the plaintiff's injuries were the result of the defendant's negligence. But, given that qualifying phrase, the medical expert is allowed to express an opinion directly to the effect that the defendant doctor's conduct, in reasonable medical probability, caused the patient's injury or death.

Conclusion

In most cases the trier of fact cannot reach a fair decision in a medical malpractice case without the benefit of proper physician testimony regarding both medical negligence and causation.

The courts in the *Lee* and *Burks* cases wisely followed the rule that one doctor should not be called upon to pass judgment on his colleague's conduct, but rather he should only testify about proper medical standards and forego expressing his own opinion about medical negligence *vel non,* thus allowing the jury or the judge to perform their function of drawing the ultimate conclusions.

However, where the issue is not negligence, but causation, the testifying doctor is not judging the defendant doctor's acts as such, but instead testifying as to the medical probability of a causal link between those acts and the patient's injuries or death.

Jack D. Maroney and Will G. Barber
Brown, Maroney, Rose, Baker & Barber
TMA Legal Counsel

---

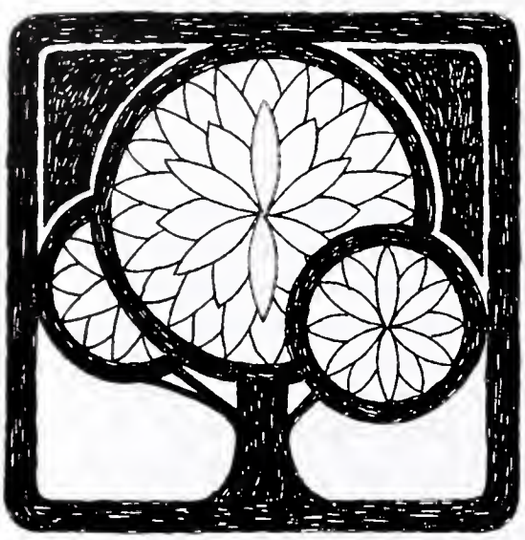
[1]*Burks v. Meredith,* Docket No. 5669 (Tex. Civ. App. - Waco, Dec. 30, 1976, application for writ of error pending) and *Lee v. Andrews,* 545 S.W. 2d 238 (Tex. Civ. App. Amarillo Dec. 13, 1976, application for writ of error pending).

[2]In *Lee* the Amarillo Court concluded that the trial court's error in admitting the "negligence" testimony was "harmless" under legal standards and did not require reversal.

[3]*Snow v. Bond,* 438 S.W. 2d 549 (Tex. 1969).

[4]*Lenger v. Physician's General Hospital, Inc.,* 445 S.W. 2d 703 (Tex. 1970).

ART EXHIBIT



TEXAS MEDICAL ASSOCIATION
110th ANNUAL SESSION

10th ANNUAL PHYSICIANS' AND SPOUSES' ART EXHIBIT

MAY 12-13-14, 1977

SHAMROCK HILTON HOTEL

For information and applications
write: Exhibit Manager
Texas Medical Association
1801 N. Lamar Blvd.
Austin, Texas 78701

No one wakes up thinking, "Today I'm going to abuse my child."

Abuse is not something we think about, it's something we do.

Last year in America, an estimated one million children suffered from abuse and neglect, and at least 2,000 of them died needless, painful deaths.

The fact is, child abuse is a major epidemic in this country.

The solution? Part of it lies in your hands. With enough volunteers, local child abuse prevention programs could be formed to aid parents and children in their own communities. With your help, eighty percent of all abusers could be helped. Please. Write for more information on child abuse and what you can do.

What will you do today that's more important?

A Public Service of This Magazine & The Advertising Council

We need your help. Write:

National Committee for Prevention of Child Abuse, Box 2866, Chicago, Illinois 60690

New TMA president ready for aggressive year in socioeconomic and legislative areas

More than twenty-five years after he first became active in organized medicine, John M. Smith, Jr, MD, will become president of the Texas Medical Association.

Dr Smith, described by colleagues as aggressive and credited with an ability to get things done, will be installed as president of TMA at the May Annual Session in Houston.

As president-elect, the San Antonio physician has had a chance to observe the state organization during the past year. "I have observed that there are many areas for improvement.

"We need to be more aggressive in the socioeconomic and legislative fields. The individual members and the local county societies need to be more active and supportive of the TMA and AMA efforts.

"The state and national officers, committees and councils cannot do the job without all-out support of the individual members," Dr Smith said.

John M. Smith, Jr, MD

Priorities set

Dr Smith has set several priorities for his term as president.

He will work to increase rapidly the residency training programs in primary care so that slots are available for 60% of the graduating classes with 40% of the slots in family practice. "This means that many new off campus programs in family practice must be instituted in community hospitals," Dr Smith said.

He will also work to increase the number of physicians in rural areas and inner cities. He cites the need, for example, to increase and equalize reimbursement to the physician in primary care, as a way to resolve the maldistribution of physicians.

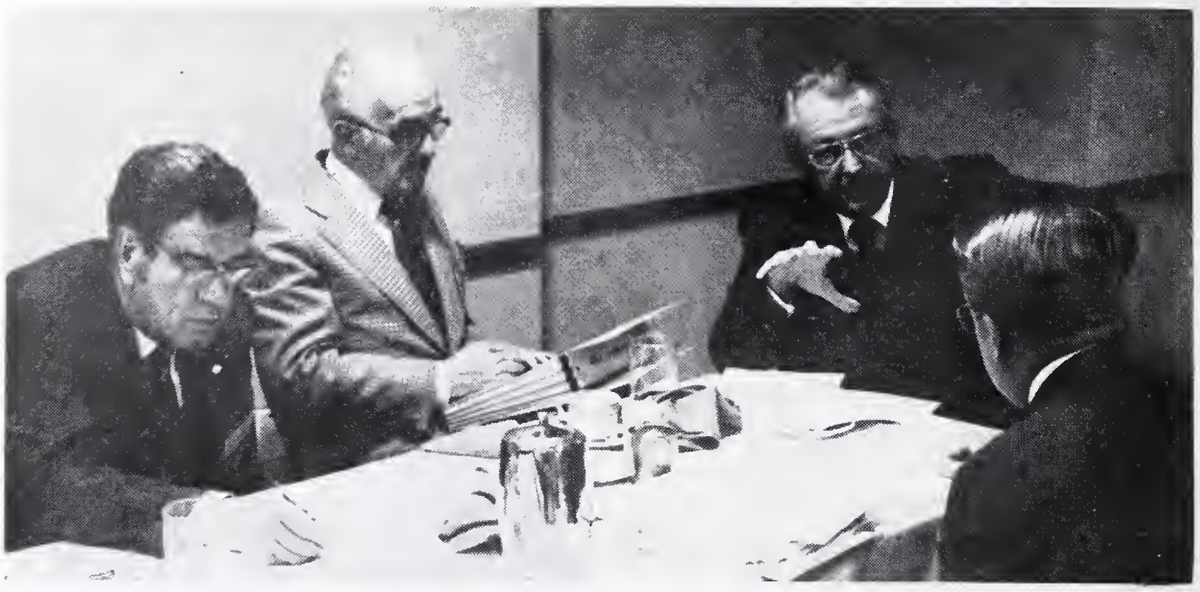
He also suggests that one way to develop an adequate health care delivery system for all Texans is to develop a program in the Greater South Texas Cultural Basin to make it a model for more adequate care for the migrants, minorities, and underserved in cooperation with appropriate agencies and private foundations. This would include expansion of the activities and potential of the Texas Medical Foundation, Dr Smith said.

His list of priorities also includes working for increased activities including socioeconomics research and aggressive efforts in health planning.

Dr Smith wants Texans to know what TMA is working for in health care areas. He supports increased coordination of activities in communications to assure that Texans have the best health care available and are cognizant of TMA leadership.

He also wants to improve health education in public schools.

"As we double our membership in the next 12 years, I want to develop and expand increased activities by the Woman's Auxiliary, interns, and residents on each appropriate TMA council and committee so that full use of their talent and input assists the officers and councils in developing policies," he said.



Dr Smith, left, confers with (from left to right) Don G. Harrel, MD, chairman of the TMA Board of Trustees, L.S. Thompson, Jr, MD, TMA president, and C. Lincoln Williston, TMA executive director, at the AMA clinical meeting in December 1976.

Dr Smith recommends continuing activity and vigilance to more nearly complete the job undertaken in the medical professional liability insurance situation.

Active in medicine, community

The 62-year-old physician began working in organized medicine in 1954 as chairman of the Community Medical Services Committee of the Bexar County Medical Society. He requested permission to study an apparent hospital bed shortage existing at that time in San Antonio.

What he found was that San Antonio was the most deficient city of its size in hospital bed facilities, and the largest US city without a medical school.

The findings of Dr Smith's committee led to joint efforts by the Bexar County Medical Society, the San Antonio Chamber of Commerce, and the South Texas Medical Foundation to "complete correction" of the bed shortage problem by 1972, he reports.

As chairman of the Facilities Committee of the Health Coordinating Committee of the Alamo Area Council of Governments in 1972, Dr Smith proposed a resolution declaring a moratorium on construction of additional acute hospital beds in San Antonio, "for the need, discovered in 1955, has been more than met," he said.

Another answer to his study was establishment of The University of Texas Health Science Center in San Antonio, and 680 acres of land being developed as the South Texas Medical Center.

In 1954 Dr Smith was president of the Alamo Chapter of the American Academy of General Practice. He served on the TMA Council of Medical Jurisprudence (now the Council on Medical Legislation) from 1954-1966. He served as a member of the Texas State Board of Health from 1963-1975.

In 1965 he was elected vice-chairman of the TMA Board of Trustees, and was president of the Bexar County Medical Society in 1967. From 1970 through 1976 he was chairman of the TMA Board of Trustees.

Dr Smith was a member of the American Hospital Association Committee on Physicians, Advisory to the Board of Trustees from 1974-1976. He has been a member of the American Medical Association Political Action Committee Board of Trustees from 1974-1977. In 1973 he became a Fellow of the American Academy of Family Physicians.

He served on the Texas Medical Foundation Board of Directors from 1973-1976. Dr Smith is a member of the Board of Directors of the Texas Political Action Committee.

Pictured in the left column from top to bottom are Dr Smith; Dr and Mrs Smith; and Dr Smith, right, and daughter Joella at the AMA meeting in Hawaii in December 1975. Pictured in the right column from too to bottom are son Paxton and his wife Day; son Burleson; and son Marvin, right, with Merle W. Delmer, MD, at the AMA clinical meeting in Chicago in December 1975.

His other numerous memberships include the American Medical Association, the American Academy of Family Physicians, the National Medical Veterans Society, the Tulane Medical Alumni Association, the Texas Medical Foundation, and the San Antonio Medical Foundation.

In civic affairs, Dr Smith has also been a leader. He is a member of the Alamo Kiwanis Club and the Town Club of San Antonio.

In 1958 he was presented the San Antonio Council of Presidents Outstanding Citizen's Award for his contributions toward establishment of The University of Texas Medical School at San Antonio. He was also presented the Civic Achievement Award by the San Antonio Chapter of the American Institute of Architects in 1959.

The new TMA president was honored by the San Antonio Medical Foundation in 1965 for aid to Bexar County Hospital District in furthering medical education, patient care, and medical research. In 1972 the Bexar County Medical Society presented Dr Smith the certificate of appreciation for distinguished service.

Born in Caldwell, Tex, Dr Smith received his BA degree from North Texas State College in 1935. He received his MD degree from Tulane University, School of Medicine in 1940.

He interned at Robert B. Green Hospital in San Antonio and served his residency at Medical and Surgical Hospital in San Antonio from 1941-1942.

He served five years in the US Army and was discharged with the rank of Major.

Family

Dr Smith and wife, Jane, have four children, all residents of San Antonio.

Son J. Marvin Smith III, MD, also a graduate of Tulane University, School of Medicine, is a surgical resident at the Bexar County Hospital from 1973-1977. In July 1977 he will begin a cardiothoracic surgery residence at Texas Heart Institute in Houston.

Joella P. Smith, a member of the San Antonio Medical Managers, is also a horsewoman and an active member of the South Texas Paint Horse Club and the American Paint Horse Association. Paxton Smith is a medical student at the University of Texas Health Science Center at San Antonio. Son Burleson will graduate from Alamo Heights High School in May and plans to attend college in the fall of 1977.

Future ambitions

How about Dr Smith's future ambitions? "I plan to continue to work to convince the citizens of Texas that the physicians of the state are interested in their health and well being and are leaders in the development and promotion of the best health care plan ever, free of political domination," Dr Smith concluded.

Physicians and the mass media

Do physicians pay attenion to health information in the mass media?

Following are some findings of a survey conducted for the Dairy Council of California by Jonathan Gutman, PhD, associate professor at the University of Southern California.

The results are excerpted with permission of the *Public Relations Journal,* December 1976, copyright 1976. The story was written by Kerry D. Tucker, Nutrition Communications Director for the Dairy Council of California.

Dr Gutman's study shows that doctors are reachable by popular forms of communications. Ninety-three percent of the MDs surveyed are frequently exposed to mass media, often in several forms.

The breakdown is: 84% to newspapers, 72% to television news, 64% to general television programs, 61% to radio, and 24% to general interest magazines.

Forty-eight percent of the physicians say they are drawn to health items appearing in the mass media.

Of the 88% of physicians who say they talk with patients about health information appearing in the mass media, 86% say the patient initiated the conversation.

Personal interviews

The Gutman survey consisted of in-depth personal interviews with 150 Los Angeles area physicians. The survey was designed to measure the influence of mass media as a health information resource for physicians.

Newspaper most popular

Newspapers are by far the most popular media, magazines the least. Almost three-fourths of the doctors watch television news shows, but are less receptive to television in general.

When asked what section of the newspaper is most likely to contain health oriented articles, the front section is an overwhelming choice.

Magazines become more visible when doctors are asked where they are exposed to the most health information and which sources are the most useful for such information. Magazines are cited second only to newspapers in this category. In all, 60% of the doctors say they are frequently exposed to health items in the popular media.

The results are: 48% to newspapers, 26% to magazines, 24% to radio, and 22% to television.

More than half of the doctors say that the popular media, in one form or another, are credible health information sources. But, they view magazines, despite their greater content of health news, and radio as the least credible.

The order of credibility: 36% for a MD newspaper column; 25% for television news; 22% for newspapers; 19% for television; 17% for a PhD newspaper column; 13% for magazines; 9% for radio news; and 6% for radio.

Mass media influence

Most physicians are predictably reluctant to say that the media directly influences their attitudes and beliefs. One in five does acknowledge such an affect. Newspapers, magazines, and television exert a similar influence, with radio again bringing up the rear.

Medical Newsmakers

Bill U. Philips, PhD

Lewis H. Roht, MD, MPH

Truman G. Blocker, Jr, MD

The Wilson Stone Award, presented annually by The University of Texas M.D. Anderson Hospital and Tumor Institute, was presented to BOSCO S. WANG, PhD, a research fellow in the Department of Pathology at Harvard Medical School. The award is given for "outstanding achievement of the biomedical sciences accomplished by a student in the United States."

CHARLES A. LEMAISTRE, MD, chancellor of The University of Texas System, is this year's recipient of the Sons of the American Revolution Good Citizenship Award. Dr LeMaistre is the 14th Texan honored by the society for outstanding contributions to the state.

A lectureship has been named for a Lubbock surgeon by the Kidney Foundation of Iowa. The lectureship honors RICHARD L. LAWTON, MD, formerly professor of surgery at the University of Iowa. He has been at the Texas Tech University School of Medicine since November 1976, as professor, vice chairperson, and director of transplantations in the department of surgery.

BILL U. PHILIPS, PhD, has been named director of the newly created office of Special Programs in Continuing Education at The University of Texas Medical Branch. The new office will assist faculty in the development of self-instructional units for continuing education of primary care physicians; encourage faculty to publish review articles in journals of general circulation among primary care physicians; and continue activities through UTMB's Area Health Education Center and Cancer Center outreach continuing education programs.

A Houston pediatrician has been appointed chairman of the Medical Service Advisory Committee of the National Foundation March of Dimes. R. RODNEY HOWELL, MD, professor of pediatrics and genetics, and chairman of the department of pediatrics at The University of Texas Health Science Center's Medical School at Houston, was named to the one-year position. Dr Howell has been a member of the national committee for the past four years.

Houston epidemiologist LEWIS H. ROHT, MD, MPH, has been named an associate investigator of a joint US-Japanese team studying the spread of viral hepatitis through blood transfusion. The research, a collaborative effort between the Japanese Red Cross and the American Red Cross, will involve a clinical trial to determine whether certain methods of processing donor blood can reduce the number of blood recipients who develop hepatitis.

DR BEATRICE MINTZ, a senior member at the Institute for Cancer Research in Philadelphia, has received the 26th annual Bertner Memorial Award from The University of Texas M.D. Anderson Hospital and Tumor Institute. Dr Mintz received the award for her distinguished contributions to cancer research.

TRUMAN G. BLOCKER, JR, MD, has been named acting president of The University of Texas Health Science Center at Houston. He replaces Charles A. Berry, MD, who resigned in February. Dr Blocker is president emeritus of The University of Texas Medical Branch at Galveston, where he is also Ashbel Smith Professor of Surgery.

Two surgeons at The University of Texas Southwestern Medical School at Dallas have been selected to occupy newly created academic positions. ROBERT McCLELLAND, MD, was named to the Alvin Baldwin Jr Chair in Surgery, and CHARLES BAXTER, MD, was appointed to the Frank H. Kidd Jr, MD, Professorship in Surgery.

Medicine in literature

EDITOR'S NOTE: This month's bibliography, prepared by the staff of TMA's Memorial Library, lists publications related to Laetrile. These and other publications pertaining to this topic are available from the Memorial Library.

LAETRILE

Culbert ML: *Vitamin B17, Forbidden Weapon Against Cancer: The Fight for Laetrile*. New Rochelle, NY, Arlington House, 1974.

Culliton BJ: Sloan-Kettering: the trials of an apricot pit—1973. *Science* 182:1000-1003, 1973.

Dipalma JR: Laetrile: when is a drug not a drug? *Am Fam Physician* 15(1):186-187, 1977.

Eyerly RC: Laetrile: focus on the facts. *CA* 26(1):50-54, 1976.

Greenberg DM: The vitamin fraud in cancer quackery. *West J Med* 122(4):345-348, 1975.

Jukes TH: Laetrile for cancer. *JAMA* 236(11):1284-1286, 1976.

Laetrile. *CA* 22:245-251, 1972.

Morris N: Potential for tragedy in public overplay in cancer "cures." *Can Med Assoc J* 113(5):465, 470, 1975.

Ross JF: Laetriles—not a vitamin and not a treatment. *West J Med* 122(4)326-327, 1975.

Sanders GB: Report from KMA Cancer Commitee—new and unproven methods of cancer treatment—"Laetrile." *J Ky Med Assoc* 74(8):377, 1976.

Soffer A: "Worthless but harmless" drugs can be deadly. *Chest* 69(3):331-332, 1976.

Soffer A: Chihuahuas and Laetrile, chelation therapy, and honey from Boulder, Colo. *Arch Intern Med* 136(8):865-866, 1976.

IN THE TMA LIBRARY

McGregor IA: *Fundamental Techniques of Plastic Surgery and Their Surgical Applications*, ed 6. Edinburgh, NY, Churchill Livingston, 1975.

Kaplan NM: *Kaplan's Hypertension Self-Assessment*. New York, Medcom Press, 1973.

Fairbairn JF II, Juergens JL, Spitell JA Jr: *Peripheral Vascular Diseases*, ed 4. Philadelphia, WB Saunders Co, 1972.

Hawkins D, Pauling L (eds): *Orthomolecular Psychiatry: Treatment of Schizophrenia*. San Francisco, Freeman, 1973.

Conference on Computerized Tomography in Radiology, St Louis, 1976: *Proceedings of the Conference on Computerized Tomography in Radiology*. Chicago, American College of Radiology, 1976.

Frazier CA (ed): *Annual Review of Allergy 1975-1976*. Flushing, NY, Medical Examination Publishing Co, Inc, 1977.

Brent L, Holborow J (eds): *Progress in Immunology, II, IV, V*. Amsterdam, North-Holland Publishing Co, 1974.

Ascher MS, Gottlieb AA, Kirkpatrick CH (eds): *Transfer Factor, Basic Properties and Clinical Applications*. New York, Academic Press, Inc, 1976.

O'Donoghue DH: *Treatment of Injuries to Athletes*, ed 3. Philadelphia, WB Saunders Co, 1976.

Dickey LD (ed): *Clinical Ecology*. Springfield, Ill, Charles C Thomas, 1976.

Evans AS (ed): *Viral Infections of Humans, Epidemiology and Control*. New York, Plenum Medical Book Co, 1976.

Bean CA: *Labor and Delivery: An Observer's Diary, What You Should Know About Today's Childbirth*. Garden City, NY, Doubleday & Co, Inc, 1977.

Lapuerta L: *Blood Gases in Clinical Practice*. Springfield, Ill, Charles C Thomas, 1976.

Hart J, Corriere R, Binder J: *Going Sane: An Introduction to Feeling Therapy*. New York, Dell Publishing Co, Inc, 1975.

Macon ND: *Clark and the Anderson, A Personal Profile*. Houston, Texas Medical Center, 1976.

New York Academy of Medicine: *Confederate States Medical and Surgical Journal*. Metuchen, NJ, Scarecrow Press, Inc, 1976.

Fogel M, Walker M: *The Medical School Admission Adviser*. New York, Hawthorn Books, Inc, 1976.

Ferrer MI: *The Sick Sinus Syndrome*. Futura Publishing Co, 1974.

Finegold WJ: *Artificial Insemination*, ed 2. Springfield, Ill, Charles C Thomas, 1976.

Kalmanson D (ed): *The Mitral Valve: A Pluridisciplinary Approach*. Acton, Mass, Publishing Sciences Group, 1976.

Brenner BM, Rector FC Jr (eds): *The Kidney, I, II*. Philadelphia, WB Saunders Co, 1976.

Hodge JR: *Practical Psychiatry for the Primary Physician*. Chicago, Nelson-Hall, 1975.

"The dentist's ex-wife wants to know how you stand on professional courtesy."

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

M.B. AYNESWORTH
Waco, 1906-1976

J.A. BERNARD
El Paso, 1918-1976

M.C. CARLISLE
Waco, 1902-1976

J.H. CUNNINGHAM, JR.
Dalhart, 1943-1976

V.T. FORNER
Houston, 1922-1976

R.A. MILLER
San Antonio, 1906-1976

R.E. MOON
San Angelo, 1912-1976

T.L. PECORA
Beaumont, 1900-1976

J.D. RAMSEY
Fort Worth, 1933-1976

A.L. VASSALLO
Dallas, 1915-1976

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

TEXAS MEDICAL MEMORIAL LIBRARY FUND

1801 N. Lamar Blvd., Austin, Texas 78701

I enclose the amount of $_____. Given in Memory of_____

Please send remembrance card to:

Name _____

Address _____

City and State _____

Donor Information:

Name _____

Address _____

City and State _____

Deaths

Dr Aynesworth

Dr Carlisle

Dr Cunningham

M. B. Aynesworth, Sr, MD

Morgan Brian Aynesworth, MD, 70, Waco, died Sept 1, 1976.

Dr Aynesworth, whose father also was a physician, was a native of Waco. He was graduated from Baylor University in 1930. He received his medical degree with honors from UT Medical Branch, Galveston, in 1935. He was a member of Alpha Omega Alpha and Phi Chi medical fraternities.

His internship was at John Sealy Hospital in Galveston, where he later was the hospital's first internal medicine resident. He also was chief resident for one year at the University of California Medical Center, San Francisco.

He was a member of the American Medical Association and past president of the McLennan County Medical Society.

The physician was a major in the US Army during World War II. He was stationed in England. He also was an honorary Texas Ranger and the owner of a noted collection of Western artifacts and antique guns.

Surviving Dr Aynesworth are his wife, Rosalis Oltorf Aynesworth, Waco; daughters, Nancy Hightower, Waxahachie, Tex, and Susan Aynesworth Brown, Austin; a son, M. Brian Aynesworth, Jr, MD, Waco; two sisters and seven grandchildren.

J. A. Bernard, MD

Jack A. Bernard, MD, 57, died Sept 4, 1976, in Nashville, Tenn.

Dr Bernard practiced internal medicine in El Paso for 25 years. He retired in 1974.

The physician was born in Rockwood, Tenn, and was graduated from Vanderbilt University, Nashville. He was a member of Phi Beta Kappa fraternity. He received his medical training at Vanderbilt University School of Medicine. His internship also was at Vanderbilt. His residency was at Lisbon Veterans Hospital, Dallas.

His professional memberships included the American College of Physicians (fellow), American Academy of Internal Medicine, El Paso County Medical Society and the American Medical Association.

Dr Bernard also was a veteran of World War II, a past president of the El Paso Diabetes Association and formerly a member of the board of directors of the South Texas Diabetes Association.

Surviving Dr Bernard are his wife, Marjorie Levy Bernard; sons, Jeffrey Bernard and Barry Bernard; and daughter, Joyce Bernard, all of El Paso; two brothers, Stanley Bernard, MD, and H. S. "Jobe" Bernard, both of Nashville; and sister, Mrs Maurice Grief of Rockwood, Tenn.

M. C. Carlisle, MD

Margil Clinton Carlisle, MD, a Waco pediatrician, died Oct 5, 1976. Cause of death was cardiac arrest.

Dr Carlisle, 74, was a former secretary and president of the Texas Pediatric Society, and had been a member of the Texas State Board of Medical Examiners for 13 years.

A native of Kopperl, Tex, Dr Carlisle attended Decatur (Tex) Baptist College, and Baylor University, Waco. He was graduated from Baylor College of Medicine in 1926.

His internship was at Scott and White Memorial Hospital, Temple (1926-1927), and his residency was at St Louis Children's Hospital (1931-1932). Dr Carlisle also undertook postgraduate studies at Harvard University Medical School.

He was a fellow of the American College of Physicians and the American Academy of Pediatrics, a member of the American Board of Pediatrics, and an honorary member of the Texas Medical Association. He also had served as chairman of TMA's Pediatric Section (1945).

He formerly had served as physician for the State Home for Dependent and Neglected Children in Waco, and was past president of the staffs of Hillcrest Baptist and Providence hospitals, Waco. A veteran of World War II, Dr Carlisle served three years in the US Army Medical Corps.

Surviving are his wife, Hallie Cox Carlisle, Waco; son, Don Carlisle, MD, Ozona, Tex; and three grandchildren.

J. H. Cunningham, Jr, MD

John Henry Cunningham, Jr, MD, 33, died July 5, 1976. He had been associated with his father at the Dalhart Clinic since 1971.

Dr Cunningham was a native of Lubbock, Tex, but spent his youth in Dalhart. He at-

tended the University of Oklahoma, Norman, and was graduated from Texas Tech University, Lubbock, in 1966. In 1970, Dr Cunningham received his MD from the University of Tennessee College of Medicine, Memphis. In 1971, he completed his internship at John Peter Smith Hospital, Fort Worth, Tex.

The family physician was a member of Beta Theta Phi social fraternity at the University of Oklahoma and Phi Rho Sigma medical fraternity. He also was a member and former secretary of the Dallam-Hartley-Sherman-Moore County Medical Society.

Surviving Dr Cunningham are his wife, Judith Ann Duncan Cunningham; daughter, Kimberly Krynne Cunningham; son, John Henry Cunningham III; parents, Dr and Mrs John H Cunningham, Sr, all of Dalhart; three brothers and one sister.

V. T. Forner, MD

Vincent Thomas Forner, MD, 54, Houston, died Oct 1, 1976.

Dr Forner had lived in Houston 23 years. He was on the staffs of Sam Houston Memorial, Spring Branch Memorial, Memorial City General and St Joseph hospitals.

The physician was born in Detroit. In 1943, he was graduated from St Louis University, and in 1950, he was graduated from St Louis University School of Medicine. Dr Forner's internship was at the US Naval Hospital, Pensacola, Fla.

Dr Forner, who specialized in industrial medicine and surgery, was a member of the American College of Surgeons (fellow), Houston Surgical Society, Harris County Medical Society and American Medical Association. He also was a member of the Board of Directors of the American Cancer Society and a veteran of World War II.

Surviving the physician are his daughters, Barbara Forner and Janet Forner; sons, Thomas D. Forner, Mark Forner and Michael Forner, all of Houston; and sisters, Marjorie Grant, Columbia, Conn, and Betty Rolle, Detroit.

R. A. Miller, MD

Robert Arden Miller, MD, 70, died Sept 30, 1976.

Dr Miller, a San Antonio anesthesiologist, was an honorary member of Texas Medical Association. He was internationally known in his field and practiced medicine for 48 years.

A native of Williamsport, Pa, Dr Miller attended the University of Pittsburgh and Susquehanna University, Selinsgrove, Pa. In 1929 he was graduated from Eclectic Medical College, Cincinnati. His internship was at Grace Hospital, Detroit, during 1929-1930.

Dr Miller moved to San Antonio in 1931. Since that date, he had practiced at the Nix Memorial Hospital. He had served as the hospital's chief of staff and chief of anesthesia, and as a member of its executive commitee.

Dr Miller's professional memberships included the American Medical Association, Texas Society of Anesthesiologists (past president and secretary-treasurer), and San Antonio Society of Anesthesiology (past president). He also was a director of the American Society of Anesthesiologists and a veteran of World War II.

Surviving the physician are his wife, Mary Green Miller, San Antonio; daughter, Nancy Moore, Tyler, Tex; son, Robert Benson Miller, San Antonio; and three grandsons.

Dr Forner

Dr Miller

R. E. Moon, MD

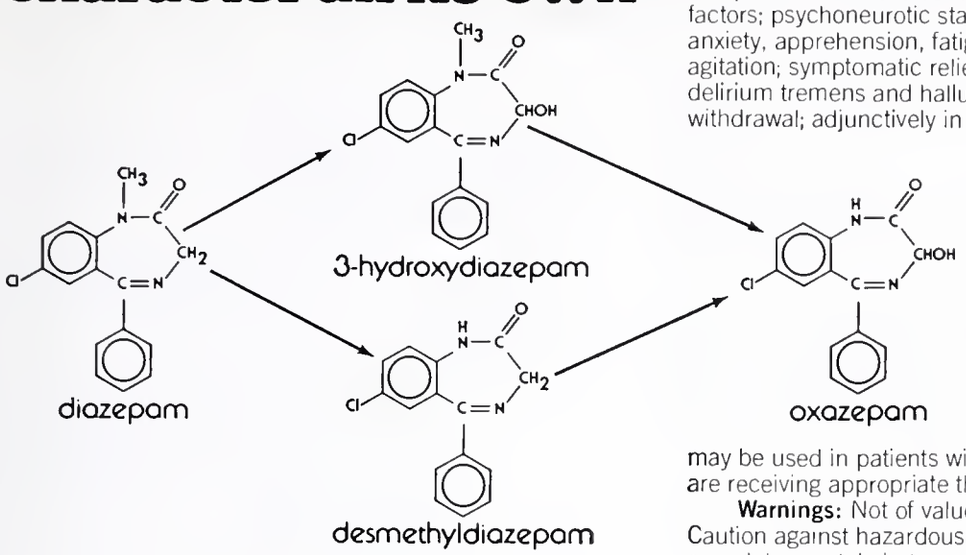
Roy Elbert Moon, MD, 63, of San Angelo, died Sept 14, 1976 after sustaining injuries in a one-vehicle accident.

Dr Moon, who was born in Chandler, Tex, moved to San Angelo in 1948 after serving as a major in the US Army Medical Corps. He practiced obstetrics and gynecology and was associated with Clinic-Hospital Foundation and Clinic-Hospital Medical Associates. He had practiced on a part-time basis since recovering from heart surgery in 1971.

He entered Baylor University in 1930. In 1933, he transferred to The University of Texas, where he was a physiology and zoology instructor. In 1935, Dr Moon entered Tulane University School of Medicine, New Orleans. He received his MD in 1939. After graduation, he served an internship at the University of Iowa Hospitals, Iowa City, and a general surgery residency at St Margarets Hospital, Montgomery, Ala. In 1941 he re-

turned to the University of Iowa Hospitals as an associate resident and resident in obstetrics and gynecology with a fellowship grant from the Rockefeller Foundation. Dr Moon was an active member of the Planned Parenthood League and the San Angelo Astronomers' Club. His professional memberships included the International College of Surgeons, Texas Association of Obstetricians and Gynecologists, American College of Obstetricians and Gynecologists, Tom Green Eight County Medical Society and American Medical Association. Surviving Dr Moon are his wife, Joy Bell Moon, and two children, all of San Angelo.

A pharmacokinetic character all its own



Valium (diazepam) is a benzodiazepine with a distinctive pharmacokinetic profile

The pharmacokinetic profile of Valium is one of the characteristics that sets it apart from other benzodiazepines. Consider, in particular, the metabolic pathway of Valium. The three major metabolites of Valium exhibit significant pharmacologic activity—and so, of course, does the parent substance—diazepam itself. All combine to produce the characteristic clinical response seen with Valium. The response you have come to know, to want and to trust.

Pharmacokinetic studies also demonstrate that Valium has a pattern of absorption, distribution, metabolism and elimination that is reliable and consistent. And, although the pharmacokinetics of a drug cannot, at present, be specifically related to its clinical effects, it is clearly a factor that distinguishes one product from another by providing important insights into how each moves through the patient's body.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Texas Physicians' Directory

DIRECTORY RATES & DATA: Space is available to TMA members at $12.50 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. Section headings are limited to those specialties designated by the American Medical Association. A list of these specialties is available upon request. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Clinics

THE FORT WORTH CLINIC

1221 West Lancaster Avenue, Fort Worth, Texas 76102
Telephone 817 336-7191

INTERNAL MEDICINE
Kendra J. Belfi, M.D.
John M. Church, M.D.
Thomas J. Coleman, M.D.
Robert R. Dickey, M.D.
Ferd E. Garrison, Jr., M.D.
Cortell K. Holsapple, M.D.
John E. Johnson, Jr., M.D.
O. M. (Jack) Phillips, M.D.

GENERAL SURGERY
John H. Sewell, M.D.
Robert L. Sewell, M.D.

ORTHOPEDIC SURGERY
Thomas E. Rapp, M.D.

CONSULTANTS IN RADIOLOGY
Victor E. McCall, M.D.
Dixon Presnall, M.D.
Harry H. Whipp, M.D.

FIFTH AVENUE CLINIC

650 Fifth Avenue, Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

THOMAS-SPANN CLINIC

1533 South Brownlee, Corpus Christi, Texas 78404
Telephone 883-7411

FAMILY MEDICINE
Travis B. Phelps, M.D., F.A.A.F.P.
T. D. Harvey, M.D., A.B.F.P.
H. R. Rose, M.D., A.B.F.P.
C. L. Vernor, M.D.
Frederick S. Maurer, M.D.

ORTHOPEDICS
C. M. Yanez, M.D., F.A.C.S.

INTERNAL MEDICINE
G. A. Reeves, M.D.
Pruett Moore, Jr., M.D.
Mark G. Strauss, M.D.

ADMINISTRATOR
Gene Hybner

DIRECTOR OF NURSES
Pat Parker, R.N.

Remind your colleagues of your specialty and office location.
Purchase a listing in the "Texas Physicians' Directory."

BEELER-MANSKE CLINIC

9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

INTERNAL MEDICINE
C. M. Maruri, M.D.
A. J. Nodarse, M.D.

GENERAL SURGERY
B. W. Hink, M.D., F.A.C.S.

FAMILY MEDICINE
J. H. Cochrane, Jr., M.D., F.A.A.F.P.
J. W. O'Bryant, M.D.
A. A. Piske, M.D.

FAMILY MEDICINE AND GENERAL SURGERY
Salvador Faus, M.D.

CLINIC MANAGER
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

MALONE AND HOGAN CLINIC

1501 West 11th Place, Big Spring, Texas 79720, Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.
W. B. Allensworth, M.D.

GENERAL SURGERY
C. B. Marcum, M.D., F.A.C.S.
J. E. Mathews, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
C. T. Moore, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
D. M. Logan, M.D.
V. T. Smith, M.D.

FAMILY PRACTICE
W. R. Strahan, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.
J. W. Kuykendall, M.D.

PEDIATRICS
J. M. Woodall, M.D.
B. R. Owen, M.D., F.A.A.P.

RADIOLOGY & NUCLEAR MEDICINE
Buerk Williams, M.D.
A. P. Goswami, M.D.

UROLOGY
G. F. Dillon, M.D., D.A.B.U.
J. W. Cowan, M.D.

DERMATOLOGY
H. K. Butler, M.D.

PODIATRY
Bradford Glass, D.P.M.

PATHOLOGY
B. A. Campomanes, M.D.

CONSULTANT IN ELECTROENCEPHALOGRAPHY
M. L. Proler, M.D.

ADMINISTRATION
R. L. Heith, Administrator
Charles N. Butts, Fiscal Officer
H. L. Mott, Office Manager
Danny Nichols, Comptroller

RUGELEY AND BLASINGAME CLINIC

2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Richard R. Raphael

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.

UROLOGY
H. Z. Fretz, M.D.

DERMATOLOGY
T. S. Arrington, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

ANESTHESIOLOGY
C. G. Spears, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77030
Telephone 713 797-9191

Internal Medicine and Diagnosis

ALLERGY
Arthur T. Pedersen, M.D.

CARDIOVASCULAR DISEASE
Thomas J. Fatherree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.
Boguslaw Godlewski, M.D.
Matthew T. Monroe, M.D.

DERMATOLOGY
Samuel F. Bean, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Raymond L. Gregory, M.D.
R. Frederick Gregory, M.D.
Thomas J. Hanson, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.
Michael Gagliardi, M.D.
James K. Gordon, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George T. Conklin, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
George Burnazian, M.D.
Benjamin L. Portnoy, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.
James V. Ryan, M.D.

NEPHROLOGY
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

NEUROLOGY
Donald J. Russell, M.D.
George Isaacs, M.D.
Ernesto Infante, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.
Harry R. Price, M.D.
Edward L. Middleman, M.D.
Martin J. Hrgovic, M.D.

PATHOLOGY
Paul B. Radelat, M.D.
Ashok M. Balsaver, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.
Martin L. Kaplan, M.D.
Louis C. Waddell, Jr., M.D.

RADIOLOGY
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.
Joe B. Wilson, M.D.
Howard J. Pollock, M.D.

NUCLEAR MEDICINE
Donald A. Podoloff, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
Robert B. Hall,
Administrator
Richard V. Vanderslice,
Assistant Administrator

HOUSTON HEADACHE CLINIC
Park Plaza Professional Building
1213 Hermann Drive, Suite 855
Houston, Texas 77004
(713) 528-1916

Neurology
Ninan T. Mathew, M.D., F.R.C.P.(C)

Allergy

PETER B. KAMIN, M.D., P.A.
Certified American Boards of Pediatrics and Allergy
Diplomate American Board of Allergy and Immunology
Allergy and Immunology

Suite 601, Oak Hills Medical Building
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Phone 512 696-4405 or 227-6331

HOUSTON ALLERGY CLINIC
Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Richard H. Jackson, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Warren J. Raymer, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
D. W. Waddell, M.D., F.A.A.C.I.A.
Ramon Garrido, M.D., F.A.C.A., F.A.A.C.I.A.*
(Certified American Board of Pediatrics)
*Diplomate American Board of Allergy & Immunology

Suite 444, Hermann Professional Building
6410 Fannin St., Houston, Texas 77030, 713 797-0900

TMA Group Insurance Plans
. . . Another service of your association

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

JOHN P. McGOVERN, M.D.
Director-Consultant

THEODORE J. HAYWOOD, M.D.
ORVILLE C. THOMAS, M.D.
JOSEPH T. QUENG, M.D.
LAWRENCE G. THORNE, M.D.
K. VENUGOPALAN, M.D.
ROBERT E. SMITH, M.D.
JAMES A. AYERS, M.D.
EUNICE W. CHOU, M.D.
ALBERT LEHMANN, M.D.
GERALD T. MACHINSKI, M.D.

Research Associates
MICHAEL H. SMOLENSKY, Ph.D.
ALAIN REINBERG, M.D., Ph.D.
CALVIN J. McLERRAN, Ph.D.
MICHAEL A. McCORMICK, Ph.D.
GLENNA M. KYLE, M.S.
ITING MAY LU, M.S.

Consultants

EVAN M. HERSH, M.D.
JUDITH H. MARSTON, Ph.D.
Immunology

JAMES A. KNIGHT, M.D.
Psychiatry

HERBERT C. McKEE, Ph.D.
RICHARD K. SEVERS, Ph.D.
Air Pollution

CAROLYN S. LEACH, Ph.D.
Clinical Laboratories

JOHN A. THOMAS, Ph.D.
Clinical Pharmacology

THOMAS D. DOWNS, Ph.D.
Biometrics

WARREN E. SCHALLER, H.S.D.
Allied Health Sciences

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025, 713 661-1444

CORPUS CHRISTI ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology

2530 Morgan, Corpus Christi, Texas, 882-3487

STUART ALAN MASON, M.D., P.A.
Fellow American Association for Clinical Immunology and Allergy
Fellow of the American College of Allergists
Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

ALLERGY AND IMMUNOLOGY
Joseph T. Sams, M.D., P.A. or C. David Meadows, M.D., P.A.
Diplomates of the American Board of Allergy and Immunology

900 W. Randol Mill Rd., Suite 215, Arlington, Texas 76012, 817 277-1161

CHARLES A. RUSH, JR., M.D.
Diplomate/American Board of Allergy & Immunology

Northeast Medical Clinic Association
7601 Glenview Drive
Fort Worth, Texas 76118

V. E. FRIEDEWALD, M.D., F.A.C.P.
Diplomate American Board of Allergy and Immunology
Allergy

2203 West Tennessee, Midland, Texas 79701, 682-5385

FREDERICK W. GROVER, M.D. & ASSOCIATES
Diplomate of the American Board of Allergy and Immunology
Allergy and Immunology
Children and Adults
6114 Sherry Lane, Preston Center, Dallas, Texas 75225
Telephone: (214) 363-7790

TMA Members' Retirement Trust (Keogh)
. . . Another service of your association

Anesthesiology

HOUSTON PAIN CLINIC
ALEX M. STRAJA, M.D., F.R.C.P.(C), F.A.C.A.
Practice Limited to Treatment of Chronic Pain Syndromes and Nerve Blocks
Practice by Referral Only
Medical Towers, 6608 Fannin, Suite 1417
Houston, Texas 77030, Phone: 713 797-1681

Colon & Rectal Surgery

ALVIN BALDWIN, JR., M.D.
Diplomate American Board of Colon and Rectal Surgery

R. D. DIGNAN, M.D.
Diplomate American Board of Surgery
Diplomate American Board of Colon and Rectal Surgery
Suite 1209 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246
Telephone 824-2573

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery
2715 Fannin Street, Houston, Texas

C.D.L. CROMAR, M.D., M.S., F.R.C.S.E., F.R.C.S.C.
Surgery of the Rectum and Colon
Suite 8, 3337 Plainview, Pasadena, Texas 77504

SOMMAI SEHAPAYAK, M.D.
Diplomate American Board of Colon and Rectal Surgery
Diseases and Surgery of the Colon and Rectum and Fiber-optic Colonoscopy
Medical Tower, Suite 210, 1550 West Rosedale,
Fort Worth, Texas 76104, 817-338-4501 (24 hours)

SUVID PITA, M.D.
Colon and Rectal Surgery
Colonoscopy
Barnett Tower, Baylor Medical Plaza
3600 Gaston Ave, Suite 411
Dallas, Texas 75246
Telephone 214 821-4300

MANUEL G. LAGON, M.D., F.A.C.S.
Diplomate American Board of Colon and Rectal Surgery
FORT WORTH COLON AND RECTAL CLINIC, P.A.
Colonoscopy, Colon and Rectal Surgery
909 Eighth Avenue, Fort Worth, Texas 76104; Telephone 332-1371

Dermatology

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy
1400 Eighth Street, Wichita Falls, Texas

DRS. PIPKIN AND RESSMANN
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies
714 Medical Arts Bldg., San Antonio, Texas 78205

J. GILMORE BRAU, M.D.
Dermatology and Syphilology
X-Ray and Radium Therapy
Hours 9 to 1—3 to 5
3817 Brown Street, Dallas, Texas

JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
A Professional Association
Dermatology, Syphilology, and Cancer of the Skin
3801 19th St., Suite 500, Lubbock, Texas 79410

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies
7777 Forest Lane, Suite 214, Dallas, Texas 75230; Phone 661-7460

GERALD A. CASID, M.D., P.A.
Skin Diseases—Skin Tumors
Hair Transplantation, Dermabrasion, Chemical Peels
333 N. Shiloh Rd., Garland, Texas 75042
Phone 214 272-5451

DAVID S. ALKEK, M.D. AND ASSOCIATES
Dermatology and Cancer of the Skin
Dermabrasion and Chemical Peel
8226 Douglas Avenue, Suite 755
Dallas, Texas 75225
Ph: 214 691-6691

Endocrinology

ENDOCRINE ASSOCIATES OF DALLAS, P.A.
STANLEY FELD, M.D.
RICHARD SACHSON, M.D.
Practice Limited to Endocrinology
Douglas Plaza Bldg., Telephone: 363-5535
8226 Douglas Avenue, Dallas, Texas 75225

Family & General Practice

GLENN C. COATES, M.D.*
GENE V. HAVERLAH, M.D.
SAM A. NIXON, M.D.*
EUGENE M. TOKAR, D.D.S.
1303 Hospital Blvd., Floresville, Texas 78114, 512 393-2527
*Diplomate American Board of Family Practice

SAMUEL SILVA, M.D.
Hair Transplantation
4759 South Freeway, Fort Worth, Texas, 817 923-7374

TMA Physicians' Placement Service
. . . Another service of your association

Gastroenterology

CECIL O. PATTERSON, M.D., F.A.C.P.
Gastroenterology, Gastroscopy, Esophagoscopy
1414 Medical Arts Building, Dallas, Texas, 742-6141-44

MILFORD O. ROUSE, M.D., F.A.C.P.
Consultations in hospitals only

DRS. BAILEY, DOUGLAS AND DEVANEY ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
George T. DeVaney, M.D.
Nisar Ahmed, M.D.

KALMAN NARAYAN, M.D.
Diplomate American Board of Internal Medicine
Gastroenterology, Gastroscopy, Colonoscopy, Polypectomy, E.R.C.P.
909 8th Ave., Suite 7, Ft. Worth, Texas 76104, 817 336-9055

General Surgery

BURT B. SMITH, M.D., F.A.C.S.
Surgery
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery
728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery
1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Thoracic Surgery
Vascular, General and Thoracic Surgery
Baylor Medical Plaza, 3600 Gaston Avenue,
Dallas, Texas 75246, 821-2356

ROBERT J. TURNER, III, M.D., F.A.C.S.
Diplomate American Board of Surgery
General and Peripheral Vascular Surgery
The Saint Joseph Professional Building
1400 South Main Street, Suite 104
Fort Worth, Texas 76104, 335-8311

ROBERT M. STECKLER, M.D.
Diplomate American Board of Surgery
Head and Neck Surgery, Surgery, and Surgical Oncology
Baylor Medical Plaza, Suite 1008, 3600 Gaston Avenue,
Dallas, Texas 75246, 214 827-9880

ROBERT DAVIS, M.D., M.B., B.Ch. (Rand), F.R.C.S. (Edin.)
General Surgery
430 Park Plaza Professional Building, 1213 Hermann Drive,
Houston, Texas 77004; 713 528-0597
By Appointment

Hand Surgery

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopaedic Surgery
PETER R. CARTER, M.D.
Hand Surgery and Upper Extremity Reconstructive Surgery
Baylor Medical Plaza, Barnett Tower, Suite 802, 3600 Gaston Avenue
Dallas, Texas 75246, 214 823-5351

Neurological Surgery

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery

Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Morris Sanders, M.D.
Phillip E. Williams, Jr., M.D.
Ira C. Denton, Jr., M.D.
W. Robert Hudgins, M.D.
Jack Woolf, M.D., Consultant

5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620,
Dallas, Texas 75235; 214 637-0420

8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905,
Dallas, Texas 75231; 214 369-7596

3600 Gaston Avenue, Barnett Tower, Baylor Medical Plaza, Suite 310,
Dallas, Texas 75246; 214 826-1976

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
Neurological Surgery
8210 Walnut Hill Lane, Suite 805, Dallas, Texas 75231, 363-8524

RONALD SMITH, M.D.
Neurological Surgery
901 South Lake, Fort Worth, Texas, 336-0551

CHERRY-LONG NEUROSURGERY ASSOCIATION
GLENN R. CHERRY, M.D., D.A.B.N.S., F.A.C.S.
R. GORDON LONG, M.D., D.A.B.N.S., F.A.C.S.
BENNIE B. SCOTT, M.D.
Neurological Surgery
Baylor Medical Plaza — 605 Barnett Tower
3600 Gaston Avenue — Dallas, Texas 75246
Telephone 214 826-7060

EL PASO NEUROLOGICAL INSTITUTE
Professional Association
Neurology, Neurosurgery, Electroencephalography
Neuro-Radiology, Physiotherapy

William J. Nelson, M.D., Neurosurgery
John T. O'Neal, M.D., Neurosurgery
Robert D. Schneider, M.D., Neurology and Electroencephalography
Steven K. Crouse, M.D., Neurology and Electroencephalography

Medical Plaza Bldg., Suite 307
El Paso Medical Center
1501 Arizona Avenue, El Paso, Texas 79902
Telephone 915 532-8901

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D., F.A.C.S.
E. FLOYD ROBINSON, M.D.
Neurological Surgery
2210 Maroneal, Houston, Texas 77025, 523-3684

TEXAS NEUROLOGICAL INSTITUTE AT DALLAS, P.A.

Neurological Surgery
James E. Bland, M.D.
Martin L. Lazar, M.D.

Medical Neurology, Electroencephalography and Electromyography
Ralph G. Greenlee, Jr., M.D.
Allan L. Naarden, M.D.
Richard R. North, M.D.
William S. Woodfin, M.D.

Neuro-Ophthalmology
Peter R. Bringewald, M.D.

Director, Pain Relief Center and Neuroanesthesiologist
P. Prithvi Raj, M.D.

Consultant in Speech
Josephine Simonson, M.A.

7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

FORT WORTH NEUROSURGICAL CLINIC

William R. Bernell, M.D.
George B. Crisp, Jr., M.D.
Charles L. Webster, Jr., M.D.

662 South Henderson, Fort Worth, Texas 76104
Telephone 338-9333; WATS Line 1-800-792-2278

Nuclear Medicine

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center
6411 South Main Street, Houston, Texas 77025

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology and Obstetrics-Gynecology

Herbert C. Allen, Jr., M.D., Director, 526-1501

HERBERT C. ALLEN, JR., M.D.

Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77025, 526-1501

Oncology

JOHN PHILIP WHITECAR, JR., M.D.

Oncology

1132 Nix Professional Building
San Antonio, Texas 78205; 512 227-6156

Ophthalmology

HOUSTON EYE ASSOCIATES

1100 Hermann Prof. Bldg., Houston, Texas 77030, 713 790-1100

Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D., F.A.C.S.
Malcolm L. Mazow, M.D., F.A.C.S.
Robert H. Stewart, M.D., F.A.C.S.
Robert B. Wilkins, M.D., F.A.C.S.
Jeffrey D. Lanier, M.D., F.A.C.S.
Michael A. Bloome, M.D., F.A.C.S.
Paul C. Salmonsen, M.D.
Richard L. Kimbrough, M.D.

TMA News Hotline — Call 1-800-252-9231
. . . Another service of your association

DRS. ALPAR, TAYLOR, HOWELL, CURRIE & WEINBERGER

Ophthalmology

John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Hugh B. Currie, M.D.
Bruce L. Weinberger, M.D.
Diplomates of the American Board of Ophthalmology
15 Medical Drive, Amarillo, Texas

TEXAS RETINA ASSOCIATES

Albert Vaiser, M.D.
William B. Snyder, M.D.
William L. Hutton, M.D.

Diseases and Surgery of the Retina and Vitreous

318 Medical Arts Building, Dallas, Texas, 748-0958

BRUCE C. TAYLOR, M.D.
RICHARD L. WINSLOW, M.D.

Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E., Dallas, Texas 75204
214 521-1153

McPHERSON ASSOCIATES

Diseases and Surgery of the Retina and Vitreous

Alice R. McPherson, M.D.
Robert A. Moura, M.D.
Arthur W. Willis, M.D.
Durham Barnes, M.D.

6436 Fannin, Suite 800, Houston, Texas 77030
713 797-1903

EYE ASSOCIATES

Diseases and Surgery of the Eye

Charles A. Sargent, M.D.
Alan C. Baum, M.D.

3838 Hillcroft, #415, Houston, Texas 77027, 713 781-2882

CORPUS CHRISTI EYE ASSOCIATES

J. Gordon Bryson, M.D.
C. A. Struve, M.D.
John W. Lewis, M.D.

3166 Reid Drive, Corpus Christi, Texas 78404, Phone 853-7319

EYE CENTER OF AUSTIN

3913 Medical Parkway
Austin, Texas 78756; 512 451-8484

Edward J. Petrus, M.D.
Richard E. Nieman, M.D.

JOHN Y. HARPER, JR., M.D., P.A.

Diseases & Surgery of the Vitreous and Retina

601 Madison Square Medical Building
311 Camden Street, San Antonio, Texas 78212
512 226-1812

PETER R. BRINGEWALD, M.D.

Neuro-Ophthalmology

Texas Neurological Institute at Dallas, P.A.
7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

By appointment only.

COASTAL BEND EYE ASSOCIATES

Jack A. Sahadi, M.D.

712 Booty Street, Corpus Christi, Texas 78404
Telephone 512 888-4288

rthopedic Surgery

H. Beckering, M.D.
Ray Lawson, M.D.
orge Truett James, M.D.
bert D. Vandermeer, M.D.
nne M. Snoots, M.D.
Stephen Curtis, M.D.

. B. CARRELL MEMORIAL CLINIC
Professional Association
28 Lemmon Ave., Dallas, Texas

ORT WORTH BONE & JOINT CLINIC
8 8th Avenue, Fort Worth, Texas

uis J. Levy, M.D.
nry C. McDonald, Jr., M.D.
ed W. Sanders, M.D.
mes M. Beckley, M.D.
seph H. Gaines, M.D.

lph E. Donnell, M.D.
Carlton Hodges, M.D.
Price Brock, Jr., M.D.

RTHOPEDIC ASSOCIATES
plomates American Board of Orthopedic Surgery

33 N. 19th St., Abilene, Texas 79601

OUSTON ORTHOPEDIC CLINIC
seph Barnhart, M.D.
nald T. Lazarz, M.D.
e C. Detenbeck, M.D.
omas S. Padgett, M.D.

20 Greenbriar, Houston, Texas 77005, 526-6262 and
rkway Towers Professional Building, 150 West Parker Road,
uston, Texas 77022, 691-3905

UBBOCK ORTHOPEDIC SURGERY CLINIC
rthopedic Surgery—Surgery of the Hand
yce C. Lewis, Jr., M.D.
nneth C. Scholz, D.D.S., M.D.
Ted Sisco, M.D., P.A.
S. Gill, M.D.

02 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

HE ORTHOPEDIC GROUP OF RICHARDSON
arles E. Graham, M.D.
Gayle Glidewell, M.D.

rthopedic Surgery

2 S. Central Expressway, Richardson, Texas 75080, 231-6396

HE ARLINGTON ORTHOPEDIC GROUP
W. Bendel, Jr., M.D.
E. Rising, Jr., M.D.*
Poindexter, M.D.
R. Vavrin, M.D.
plomates American Board of Orthopaedic Surgery
mphasizing Surgery of the Hand
ank R. Vincenti, M.D.

1 West Randol Mill Road, Arlington, Texas 76012, 817 261-8284

OUIS W. BRECK, M.D., P.A., F.A.C.S.
plomate American Board of Orthopaedic Surgery
ractice Limited to Orthopaedic Surgery

09 North Kansas, El Paso 79902
lephone 915 544-3831

HURSTON DEAN, M.D.
iplomate American Board of Orthopedic Surgery

9 N. Garfield Street
idland, Texas 79701
lephone: 915 682-0433 or 682-0163

DDRESS CHANGE? Avoid missing or delayed mail. Send old d new address to Membership Department, Texas Medical Association, 301 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC ASSOCIATES OF DALLAS
F. Leon Ware, M.D.
Dan R. Sutherland, M.D.
John B. Gunn, M.D.
Richard A. Shirley, M.D.
R. Dan Loyd, M.D.

Orthopedic Surgery

3600 Gaston Avenue, Suite 303
Dallas, Texas 75246; 214 823-7090

Otolaryngology

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.
Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

Otology

DANIEL McNAMARA MARTINEZ, M.D., F.A.C.S.
Otology and Otoneurology

8210 Walnut Hill Lane, Presbyterian Professional Building,
Suite 400, Dallas, Texas 75231; 214 691-7331

DALLAS HEARING, BALANCE AND OCULAR PULSE LABORATORY
Audiology—Vestibulometry—Non-invasive Carotid and Vertebral Circulation Studies

402 Presbyterian Professional Building, 8210 Walnut Hill Lane,
Dallas, Texas 75231; 214 691-7367

Pathology

FORT WORTH MEDICAL LABORATORIES
John J. Andujar, M.D.
Dorothy Patras, M.D.

1400 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

BROWN & ASSOCIATES MEDICAL LABORATORIES
Clinical Pathology, Hematology, Surgical Pathology, Exfoliative Cytology and Electrophoresis

Wilson G. Brown, M.D.
George V. Miller, M.D.
Walter G. Olin, Jr., M.D.
John R. Thomas, M.D.
S. Joseph Skinner, M.D.
Joe B. Haden, M.D.
Enrique van Santen, M.D.
Elaine V. Shalek, M.D.
Robert H. McNeely, M.D.
Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas 77030
220 Park Plaza Prof. Bldg., Houston, Texas 77004
Telephone 527-5230
Mailing Containers on Request—Office Pickup Service in Houston

PRUITT MEDICAL LABORATORIES
Jack Pruitt, M.D.
E. Hernandez, M.D.
Diplomates, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation
P. O. Box 160, Lufkin, Texas 75901, 634-4451

TMA International Travel Program
. . . Another service of your association

WACO CLINICAL PATHOLOGY LABORATORY
K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Robert Wayne Walter, M.D., F.A.C.P.
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation
Mailing Containers on Request
2112 Washington Ave., P.O. Box 3160, Waco, Texas 76707, 756-7226

J. S. Wilkenfeld, M.D., Medical Laboratories, Inc.
J. S. WILKENFELD, M.D. ENA E. MOCEGA, M.D.
Diplomates of the American Board of Pathology
Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology
8850 Long Point Road, P.O. Box 55008
Houston, Texas 77055, 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

ARTHUR L. RAINES, M.D. AND ASSOCIATES
Pathologists
DIPLOMATES, AMERICAN BOARD OF PATHOLOGY
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation
Hospital and Clinic Laboratory Consultation
P. O. Box 118, Cleburne, Texas 76031
817 645-9181, Ext. 360
MAILING CONTAINERS ON REQUEST

HENRY B. OWENS, M.D., F.C.A.P.
Diplomate American Board of Pathology
Cytology and Tissue Pathology Only
801 E. Border St., Suite M, P. O. Box 1627
Arlington, Texas 76010, 817 461-2771
Mailing Containers on Request—Office Pickup Service in Arlington

Physical Medicine & Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES WARM SPRINGS FOUNDATION, INC.
P. O. BOX 58, GONZALES, TEXAS 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade
DAVID E. GUMPER, Administrator
LARRY E. BROWNE, M.D., Medical Director

ROBERTO G. ROLFINI, M.D.
Diplomate American Board of Physical Medicine & Rehabilitation
Rehabilitation Medicine and Electromyography
702 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205, Telephone 226-2424

WILLIAM T. BLESSUM, M.D.
Physical Medicine, Rehabilitation, & Electromyography
7342 Oak Manor, Suite 125
San Antonio, Texas 78229; Telephone 512 349-6573

SHOAL CREEK REHABILITATION CENTER
3501 Mills Avenue, Austin, Texas 78703, 512 452-0361
Rodney J. Simonsen, M.D., Medical Director
Joe T. Powell, M.D., Associate Director
Comprehensive rehabilitation facilities for spinal cord injury, stroke, head injury, pain management, and related conditions

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D., F.A.C.S.
THOMAS M. BIGGS, M.D., F.A.C.S.
LAURENCE E. WOLF, M.D.
Diplomates American Board of Plastic Surgery
PLASTIC SURGERY
5419 Caroline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery
530 Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Cosmetic Surgery
612 Doctors Bldg., Fort Worth, Texas 336-0356

PLASTIC SURGERY ASSOCIATES
Simon Fredricks, M.D., F.A.C.S.
Charles W. Bailey, Jr., M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery
Jonathan J. Dora, M.D.
1103 Medical Towers, Houston, Texas 77025, 523-5575

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
Plastic & Reconstructive Surgery
Cosmetic Surgery
606 Medical Plaza Bldg., 800 Eighth Avenue, Fort Worth, Texas 7610
335-4751

VALENTIN GRACIA, M.D., P.A., F.A.C.S., F.I.C.S., D.A.B.
Aesthetic Surgery—Burns
1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

FRANCIS A. MORRIS, JR., M.D.
Diplomate American Board of Plastic Surgery
Plastic Surgery
3100 Red River, Austin, Texas 78705; 512 476-9149

PATRICK H. BECKHAM, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery
1111 West 34th Street, Suite 207, Austin, Texas 78705, 459-3258

WILLIAM E. BARNES, M.D.
Diplomate American Board of Plastic Surgery
Cosmetic Surgery
Plastic & Reconstructive Surgery
1301 West 38th Street, Suite 608, Austin, Texas, 454-7659

JOHN E. CARTER, M.D., P.A.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Telephone: (Area Code 512) Office 696-2390 Medical Exchange 227-633

JOSEPH C. FORD, M.D., P.A., F.A.C.S.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery
508 Madison Square Medical Building
311 Camden, San Antonio, Texas 78215, 224-5509

BROMLEY S. FREEMAN, M.D., F.A.C.S.
D. ROBERT WIEMER, M.D.
Diplomates American Board of Plastic Surgery
Plastic & Reconstructive Surgery

7000 Fannin, Suite 1770, Houston, Texas 77025
713 795-5584

JACK L. CONLEE, M.D.
Diplomate American Board of Plastic Surgery
Plastic and Cosmetic Surgery

3318 S. Alameda, Suite 1, Corpus Christi, Texas, 855-7359

PLASTIC SURGERY ASSOCIATION
LEONARD KOCH, M.D.
Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410, 806 792-2313

ROBERT L. CLEMENT, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive Surgery

1111 West 34th Street, Suite 205, Austin, Texas 78705, 512 459-3101

STEPHEN C. LESAUVAGE, M.D.
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1318 Clinic Drive, Tyler, Texas 75701; 214 593-8296

Psychiatry

Perry C. Talkington, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Larry R. Kimsey, M.D.
Charles M. Smith, M.D.
Gregory G. Dimijian, M.D.
Linda R. Hughes, M.D.
Roy H. Fanoni, M.D.
Byron Howard, M.D.
Larrie W. Arnold, M.D.
Madeline W. Harford, M.D.
John G. Looney, M.D.

Practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

ALAN B. BRINSMADE, M.D.
General Psychiatry
Specializing in Psychotic Illnesses-Acute and Chronic

Hermann Medical Center Professional Building
Houston, Texas 77025, 713 524-8496

Texas Continuing Education Directory
. . . Another service of your association

FABRE CLINIC

LOUIS F. FABRE, JR., M.D., Ph.D.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy
Children — Family — Alcoholism

Free of charge to patient MEDICATION CLINIC
FOR PATIENTS WITH ANXIETY OR DEPRESSION
IN CONJUNCTION WITH CNS RESEARCH WITH
PSYCHOPHARMACOLOGICAL COMPOUNDS

DAVID McLENDON, Ph.D.
Licensed Clinical Psychologist
Individual and Group Psychotherapy
Diagnostic Evaluations and Counseling

H. JOHN JACKSON, Ed.D.
Educational Psychologist
Administrative Consultation to School District
Program Organization Consultation
Individual Family Counseling

5503 Crawford Street, Houston, Texas 77004, 713 526-2328

PERRY C. TALKINGTON, M.D.
Psychiatry

4645 Samuell Blvd., Dallas, Texas 75228, 214 381-3849

CHARLES B. COVERT, M.D., P.A.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy

San Felipe Green Professional Building, Suite 314
1900 Yorktown, Houston, Texas 77056; 713 627-9988

HARRIS HAUSER, M.D. AND ASSOCIATES
Psychiatry

Frank H. Chesky, M.D.
Jose A. Gutierrez, M.D.
Harris M. Hauser, M.D.
Linda S. Blume, A.C.S.W.

7777 Southwest Freeway, Suite 1004, Houston, Texas 77074;
713 772-4600
1740 West 27th, Suite 315, Houston, Texas 77008; 713 772-4600

TMA 1977 Annual Session
May 12-15 Houston

Psychiatry & Neurology

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., J. J. Leyva, M.D.

Department of Psychology
Allen Goss, Ph.D., Jim M. Phillips, Ph.D.

Practice Limited to Neurology and Psychiatry
Office Hours By Appointment

First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

STEPHEN WEISZ, M.D.
Practice Limited to Neurology and Psychiatry

1637 Medical Arts Bldg., Dallas, Texas 747-5183

HAUSER CLINIC
Psychiatry, Neurology, Electroencephalography and Electromyography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
*H. James Stuart, M.D.
Javier A. Zapata, M.D.
*Susan B. Darsey, M.D.
*Harvey A. Rosenstock, M.D.

Section of Psychology
Ken R. Vincent, Ed.D.

Administrator
Richard J. Kurzenberger

Section of Neurology
*Gerald Ratinov, M.D.
*Robert M. Gordon, M.D.
*Ronald DeVere, M.D.

Section of Social Work
Pamela Plimmer, A.C.S.W.
Marguerite Papademitriou, A.C.S.W.
Margery Engel, M.S.S.W.
Jean Lerner, M.S.W.

808 Memorial Professional Building, Houston, Texas 77002
Telephone 713 224-5041

*Diplomate, American Board of Psychiatry and Neurology

THE FORT WORTH NEUROPSYCHIATRIC CENTER
*Herbert G. Rush, M.D.
A. Arauzo, M.D.
Sanford Lehrer, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

*Diplomate American Board of Psychiatry and Neurology

H. KORNBLIT, M.D.
Neurology—Headache Clinic

Memorial City Prof. Bldg. #176
902 Frostwood, Houston, Texas 77024

MEMORIAL NEUROLOGICAL ASSOCIATION
Neurology, Electroencephalography, Electromyography and C. T. Scan
James L. Frey, M.D.
Harris M. Hauser, M.D., F.A.A.N.
Cheor J. Kim, M.D.
Lorenzo Lorente, M.D.
1740 West 27th, Suite 315, Houston, Texas 77008, 713 861-4516
7777 Southwest Fwy., Suite 1004, Houston, Texas 77074, 713 772-4600

Radiology

ROYAL WERTZ, M.D., F.A.C.R.
Practice Limited to Radiology

800 Rusk Street, Amarillo, Texas 79106, 373-8324

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D., D.A.B.R.

RADIOLOGY
109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

KARL THORD DOCKRAY, M.D.
Diplomate, American Board of Nuclear Medicine
Diplomate, American Board of Radiology

Roentgenology, Nuclear Medicine, Xeromammography
Mobile Film Service for Area Nursing Homes

763-5774 Office 765-7701 Page 762-0471 Mobile
Lubbock, Texas

Rheumatology

DON E. CHEATUM, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204, 823-4151

ROY M. FLEISCHMANN, M.D.
Diplomate American Board of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

3707 Gaston Avenue, Suite 810, Dallas, Texas 75246; 827-0868

Thoracic Surgery

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.
Maruf A. Razzuk, M.D.

DRS. PAULSON, URSCHEL, RAZZUK AND ASSOCIATES
Thoracic and Cardiovascular Surgery

1201 Barnett Tower
3600 Gaston Avenue, Dallas, Texas 75246; 824-2503

JOHN L. KEE, JR., M.D.
Thoracic Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246; 826-5184

ALLAN L. GRAHAM, M.D., F.A.C.S.
KARAMAT U. CHOUDHRY, M.D., F.A.C.S.
Diplomates American Board of Surgery and Board of Thoracic Surgery

ROBERT W. MILEY, M.D.
Diplomate American Board of Surgery

Cardiac, Thoracic and Vascular Surgery Associates
800 Eighth Ave., Suite 626, Fort Worth, Texas 76104: 332-7878

HECTOR O. YANES, M.D., P.A., F.A.C.S., F.A.C.C.
Cardiac, Vascular and Thoracic Surgery

Diplomate American Board of Surgery and
American Board of Thoracic Surgery

432 Medical Plaza, 800 Eighth Ave.,
Fort Worth, Texas 76104, 332-1947

RICHARD E. WOOD, M.D.
Cardiac, Thoracic and Vascular Surgery

Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890

Hours By Appointment

Hugh E. Wilson, M.D. and Associates

HUGH E. WILSON, M.D.
CHARLES T. MEADOWS, M.D.
Thoracic and Cardiovascular Surgery

6161 Harry Hines Boulevard
Dallas, Texas 75235; 214 637-3470

Urology

JO C. ALEXANDER, M.D., FOSTER FUQUA, M.D.,
ELGIN W. WARE, JR., M.D., GEORGE E. HURT, JR., M.D.,
DONALD E. JOHNSON, M.D. & ASSOCIATES
L. MICHAEL GOLDSTEIN, M.D., THOMAS P. REILLY, M.D.

Urology

3600 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109

Dolphus E. Compere, M.D., F.A.C.S.
Grant F. Begley, M.D., F.A.C.S.
Hugh Lamensdorf, M.D., F.A.C.S.

Diplomates of American Board of Urology

H. M. GIBSON, JR., M.D., F.A.C.S.
ABEL GARDUNO, M.D.
Certified by American Board of Urology

Practice Limited to Urology

512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephone 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
NEWTON F. McDONALD, M.D.
JAMES E. MORNEAU, M.D.

Practice Limited to Urology

1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

DONALD J. NEESE, M.D.

Diplomate of American Board of Urology

Practice Limited to Urology

570 Park Plaza Professional Building
1213 Hermann Drive, Houston, Texas 77030; 713 524-3931
400 Medical Center Blvd., Suite 207, Webster, Texas 77598; 713 332-2466

EUGENE R. TODD, M.D., P.A.

Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3434 Swiss Ave., Suite 406, Dallas, Tex. 75204, 214 826-3500

DALLAS UROLOGY ASSOCIATES

David D. Reisman, M.D.
Donald J. Logan, M.D.
Allen S. Plotkin, M.D.
Donald L. McKay, M.D.

Practice Limited to Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

JOSEPH D. MITCHELL, JR., M.D.
TROY W. SCOTT, M.D.

Urology

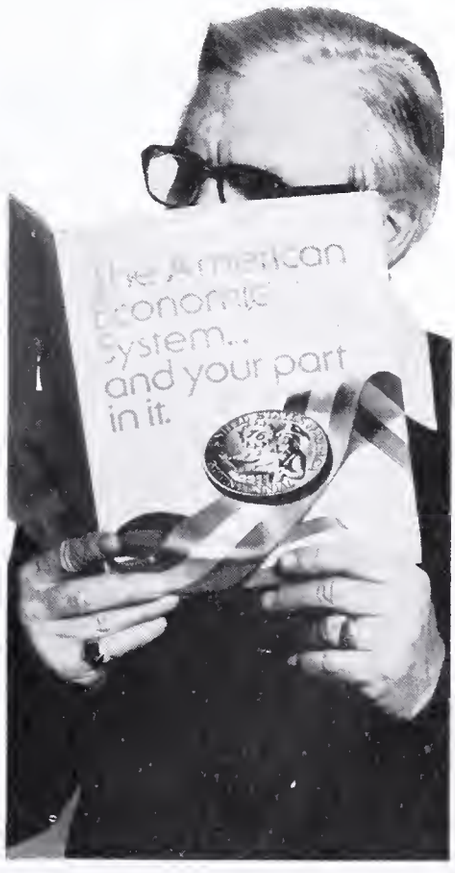
Barnett Tower, Suite 906, Baylor Medical Plaza,
3600 Gaston Avenue, Dallas, Texas 75246

TMA Physicians Benevolent Fund

. . . Another service of your association

How much change does our American Economic System need: A lot? A little? None?

The more we all know about our system and how it works, the better we can decide what to preserve, what to change in the years ahead. That's why this special booklet has been prepared. Every American ought to know what it says. For a free copy, write: "Booklets," P.O. Box 1887, New York, N.Y. 10001.



A public service of The Advertising Council & U.S. Department of Commerce presented by this Magazine

Ad Council

Classified Advertising

Physicians Wanted

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from the big city problems. Call collect Dr. David M. Pogue at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6388.

PSYCHIATRIST, board certified or eligible needed for modern forensic psychiatry program. Texas license required. Salary $34,000+. Immediate openings. Call or write: Robert B. Sheldon, M.D., Superintendent, Rusk State Hospital, P. O. Box 318, Rusk, Texas 75785; 214-683-5481.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic; adjacent to 36 bed hospital, recently remodeled. Salary $40-48,000 per year. Partnership available after trial period. Contact Willis G. Youens, Jr., M.D., 105 N. Grohmann, Weimar, Texas 78962; 713-725-8545.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

EMERGENCY DEPARTMENT GROUP, HOUSTON AREA, EXPANDING—choice of salary or fee-for-service with guarantee—malpractice paid—Call 713-861-7942 or write Greater Houston Emergency Physicians Association, 625 West 19th, Houston, Texas 77008.

FAMILY PRACTICE—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Conzales County Hospital District, Conzales, Texas 512-672-2811.

FAMILY PRACTITIONER WANTED to join two established family practitioners in Trinity, Texas. Former partner is leaving November 1976 for residency. A large ready made practice is available now. You are invited to investigate clinic and hospital facility, compatibility, economic and environment of rural practice in an outstanding recreational area that includes 2,000,000 acres of East Texas forest, 90,000 acre Lake Livingston, various golf courses, marinas, and country club developments. All guarantees, etc. are negotiable. Bring your wife. Sam R. Barnes, M.D. and J. Richard Cook, M.D., P.O. Box 672, Trinity, Texas 75862.

FAMILY PRACTICE, GENERAL PRACTICE—Wanted immediately to join physician staff in rural community one-hour from Dallas-Fort Worth area. Extremely active practice with good benefits and an opportunity to enter into the corporation. Practice is with physicians clinic, 26-bed hospital, and 42-bed nursing home within the same building complex. Excellent arrangement for family practice. For further information contact Roger E. Marks, M.D., 817-897-2215 or 817-897-4436; Clen Rose, Texas.

PSYCHIATRIC RESIDENCY in approved three-year program. Effective connections with universities, medical schools, private clinics and community centers. Outstanding faculty and programs. Stipends with Texas license are $15,000, $16,000 and $17,000 per year. In addition, now offering residency in child psychiatry. For full information, write to Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Cuadalupe Street, Austin, Texas 78751.

CHILD PSYCHIATRY RESIDENCY may be taken before or after adult psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psychopharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed in-patient unit for children. Liaison with graduate schools, medical school and community programs. Stipends: First year, $15,000; second year, $16,000; third year, $17,000; fourth year, $18,000. Contact Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Cuadalupe, Austin, Texas 78751.

INTERNIST—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Conzales, Texas. 512-672-2811.

EMERGENCY MEDICINE CROUP PRACTICE in Texas. Salary $44,000 with many fringe benefits. Send resume to Houston E.P.A., 8700 Commerce Park Drive, Suite 121, Houston, Texas 77036.

WANTED: INTERNIST TO JOIN busy solo internist in new office. Complete clinical laboratory facilities plus x-ray. City of 25,000 population in Northeast Texas. Drawing area of 100,000. Two new hospitals. High caliber medical community. Excellent recreational facilities; good schools and churches. Ideal family city. Please reply to Ad-625, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EXCELLENT OPPORTUNITY FOR ONE OR TWO FPs. North Central Texas, small town, large lake. Large cities nearby. Exceptional recreation on doorstep. Clinic adjacent to new hospital. New schools, churches, homes. On-call time with three others. Solo or group. Salary guarantee. Growing area. Help needed badly. Please reply to Ad-663, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN WANTED: FAMILY CARE AND CHRONIC. Hospital facilities available ten miles. Clinic space available downtown Kemp. Pharmacy available. 45 miles southeast Dallas. Close to Cedar Creek Lake, fastest growing recreational-retirement area in Texas. Projected 100,000 population by 1980 in area. Country club, golf course, three miles. Excellent opportunity. Please reply to Edmund Horton, Ph., P.O. Box 449, Kemp, Texas 75143; phone 214-498-2011.

WANTED: FAMILY PRACTITIONER TO JOIN three man group. East Central Texas. New joint commission approved 30 bed hospital. Airport. New junior-senior high complex. Railroad division point. Small industry. Primary income ranching. Three fishing lakes. Deer, quail, dove hunting. Country club. No initial investment necessary. Contact Drs. Gage, Cox or Halbert, 315 Main Street, Teague, Texas 75860, 817-739-2561.

GENERAL INTERNIST AND FAMILY PRACTITIONER NEEDED to join nine man group in Clifton, Texas. Located in the heart of Texas, 30 miles NW of Waco; 15 miles from Lake Whitney. Good fishing; excellent hunting; new modern golf course. Excellent schools and churches in a growing progressive community and directly associated with a 75 bed, Hill Burton hospital which is fully accredited by the joint commission. Terms open at first with partnership in future. Please contact V. D. Goodall, M.D., Clifton Medical & Surgical Clinic Association, Clifton, Texas 76634. Telephone 817-675-8621 or 675-3113.

FAMILY PRACTITIONER: Psychiatric Clinic, seeking to expand medical services in the practice, has fully furnished facilities, including office & staff, for family physician. Choice location, close to four hospitals. Apply D. McCann, 2616 N. Oregon, El Paso, Texas 79902. 913-532-5232.

STUDENT HEALTH SERVICE—Beautiful campus, competitive salary and benefits, East Texas recreational area. New clinic in planning. Contact Capt. A. C. Harris USN (RET), Box 3058, Nacogdoches, Texas 75961. 713-569-4008.

PUBLIC HEALTH DIRECTOR: The City of Austin, Texas, is accepting applications for the position of Director, Austin-Travis County Health Department. Full medical and administrative direction of local public health activities in a $4 million department of the City. Must be an MD with administrative experience; Texas license and MPH preferred. Salary starts at $35,000+, depending upon qualifications. Send resume to: Dan H. Davidson, City Manager, P.O. Box 1088, Austin, Texas 78767; 512-477-6511. Equal employment opportunity.

PHYSICIAN WANTED TO JOIN three-man group; two CP's, general surgeon (all Board). Practice in Hearne, Texas, population 5,000; drawing area 12,000+. Contact Dr. Ken Kennamer, Hearne, Texas; 713-279-3451 or 713-279-3100.

GENERAL PRACTITIONER NEEDED: To work with general surgeon doing GP work. Excellent opportunity for a doctor desiring family practice work. May start with salary of $45,000 per year negotiable. City has population of 9,000 with trade area of 25,000 to 30,000. Contact Chris S. Cruzcosa, M.D., 300 S. 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $10.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

WEST TEXAS LOCATIONS: PRIMARY CARE AND SPECIALIST. You can build your own fast growing practice in one of the world's most beautiful outdoor recreation areas—good schools, excellent cultural opportunities. We provide professional assistance in all areas—optimum practice location, securing necessary financing, getting best competitive prices on supplies and equipment, selection of personnel, bookkeeping and records. Professional and ethical consultation tailored to your requirements. We have worked with some of El Paso's most successful physicians and gladly furnish references. Write or call for information at no cost or obligation. McDonnell, Cameron & Associates, 3379 Wedgewood Drive, El Paso, Texas 79925; 915-592-5984.

WANTED: PEDIATRICIAN in Houston suburb (Montgomery County). Guaranteed salary of $24,000 a year plus percentage, plus fringe benefits. Contact Jamil T. Azzam, M.D. at 713-444-8906 or after 7 p.m., 713-273-1017.

FAMILY PRACTITIONER WANTED to join multi-specialty group in Central Texas. Salary first year to start $45,000 with bonus at the end of the year based on percentage of work. Please reply to Ad-706, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST AND GP/FP—Pine hills of East Texas. Thriving city of 65,000. Extraordinary cultural and recreational activities. Medical center of East Texas. Nine man group, 3 GP, 3 IM, 3 surgeons. Please contact Robert Felix, Administrator, Medical and Surgical Clinic, Box 6026, Tyler, Texas 75701. Phone 214-593-1721.

PHYSICIANS WANTED—Growing hospital in progressive East Texas town near metroplex needs ambitious physicians to join staff. Write Paul Bennet, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75647.

THE DEEP EAST TEXAS REGIONAL Mental Health Mental Retardation Services is now recruiting for a board eligible or a board certified psychiatrist. Salary, $41,800 annually for board certified. Fringe benefits include paid hospitalization, $80,000 life insurance, $1,000,000 professional liability. This position will be located in Lufkin, Texas, in the heart of the lake country. Lufkin, population 26,000, is a progressive community, fine schools, churches. An excellent place to live and raise a family. If interested, call William Earl Tyler, 713-634-2241 or write 303 Angelina Building, Lufkin, Texas 75901. An equal opportunity employer.

WANTED: Middle aged, perhaps older, well-trained and experienced internist or family practitioner. Light hours, easy responsibility backed by eight certified specialists staffing a very modern physician-controlled JCAH surgical and medical specialty hospital that adjoins offices. New 150 bed JCAH general hospital minutes away. Excellent southwestern climate; superior, unhurried lifestyle in wealthy 23,000 population city in center of large prosperous trade territory with two major medical centers immediately available. Above average earning potential. Guarantee negotiable with hospital furnishing office and complete ancillary services, both professional and business. This is for a competent man tired of the rat-race. He will practice better medicine for an appreciative clientele; his living conditions will be improved and less costly than in a large city. He will be only three or four minutes from work, shopping centers, golf course or airport. Hence an opportunity worth exploration. Contact E. O. Nichols, Jr., M.D., E. O. Nichols Hospital, Inc., Plainview, Texas 79072; 806-296-7425.

INDUSTRIAL PHYSICIAN TO JOIN multispecialty group as an addition to a large industrial department. Some surgical training desired; family practice boards acceptable. Work consists of pre-employment physicals, industrial injuries, and family practice. Salary and partnership negotiable and competitive. Keogh plan available. Adequate time off. Modern clinic facilities. Growing town of 125,000. Send curriculum vitae and references to Harry Ledbetter, M.D., 1518 Tenth Street, Wichita Falls, Texas 76301.

NORTHEAST TEXAS COMMUNITY of 23,000 with large drawing area needs more pediatrics, OB-GYN, internal medicine, and family practice coverage. Modern 250 bed hospital with all other specialties represented. Solo or group type practices available. Wonderful family oriented community with excellent nearby recreational facilities. Contact Larry A. Cowley, M.D., 2870 Lewis Lane, Paris, Texas 75460 or call 214-785-5588 or 785-7115.

NEED GENERAL OR FAMILY PRACTITIONER, PEDIATRICIAN, OBSTETRICIAN for a new medical, dental and professional complex set among trees with peaceful atmosphere in Northwest Austin; 25,000 people in 2 mile radius with no physicians or facilities. Home sites for 75,000 more developing; twenty minutes from center of Austin and hospital. Please reply to Ad-710, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL INTERNIST AND FAMILY PHYSICIAN—To join 20-man multi-specialty group in community of 70,000. New facilities. Liberal guarantee with incentive first year; then shareholder. Cultural activities; recreational activities, golf, tennis, hunting, water sports. Contact Angelo Clinic Association, 120 East Beauregard, San Angelo, Texas 76903.

UROLOGIST WANTED to join 15 man multispecialty group in El Paso, Texas. Full partnership after one year. Five weeks vacation, retirement and health plans. Malpractice paid. Call 915-592-0201, ext. 1680, R. D. Bobbitt, M.D.

Situations Wanted

PATHOLOGIST, 32, wife pediatrician, both university trained. FLEX licensed in Illinois and board qualified. Desire suitable placement in Texas, available July 1977. Dr. Bala, 526 Maple Lane, Darien, Illinois 60559; telephone 312-963-2133.

POSITION WANTED: Clinical laboratory supervisor desires to return home to Texas. Extensive experience in clinical chemistry, clinical microbiology, and clinical laboratory administration in hospital and clinic laboratories. Position and salary negotiable. Please reply to Ad-692, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST 43, certified AP/CP seek association or directorship of hospital laboratory. Texas license. Available May 1977. Contact Jon B. Owens, Jr., M.D., 1037 Cheshire Lane, Houston, Texas 77018; telephone 713-686-5819.

UROLOGIST, age 35, will complete 4-year program June 1977. Board eligible, available July 1977. Seeking solo, association leading to partnership or group practice in Texas. Please reply to Ad-693, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SEEKING LOCATION: 31 year old, US trained general surgeon, will be board eligible July 1977. Experienced in endoscopy. Prefer medium to small community. Available July 1977. 504-455-7499, or write Ad-694, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED EXPERIENCED GENERAL SURGEON, currently serving as a missionary in Latin America. Seek salaried position for 10 month period beginning August 1977. Please reply to Ad-697, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, 32, university trained in general and peripheral vascular surgery. Native of US. Would like to establish general surgery practice in Texas. All locations considered. Will complete military obligation in July 1978. Office phone: 913-684-3971. Home phone: 913-684-4766.

BOARD CERTIFIED, in late 30s, over 10 years experience with New York State Department of Mental Hygiene as a psychiatrist in various positions—clinical, teaching and administration. Seek solo or group multispecialty practice or salaried position in community mental health service or Texas State mental health department. Expect to get Texas medical license in June 1977. Available summer 1977. Please reply to J. Pingili, M.D., P.O. Box 14, West Brentwood, New York 11717; 516-231-4235 (contact between 8 p.m.-10 p.m.).

PATHOLOGIST—University trained AP/CP, to finish residency end of June. Desire position in private group or hospital practice. Special interest in cytology. National boards. AOA. Please reply to Ad-702, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN MARRIED with two children, ECFMG, board eligible July 77. Eligible for Texas license, seeking salaried position in Houston or vicinity. Will consider hospital, public health, group practice or ER (mainly in pediatrics). Please reply to Ad-705, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ANESTHESIOLOGIST: 48, board eligible, wide experience. Eight years anesthesia, four years in England D.A. (Royal College). Available July 1977. Group or fees for service. Please reply to Ad-703, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED FAMILY PRACTITIONER plans to relocate, medium or small town, associate or exchange call with other physicians. Prefer not to do obstetrics or surgery, predominately office practice preferred. Please reply to Ad-704, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PSYCHIATRIST, BOARD ELIGIBLE, age 37, married. Passed Part I of boards. Desires to relocate in large urban area in Texas. Presently, chief psychiatrist in out-patient department with previous experience in in-patient, emergency, forensic and child. Prefer full-time position in CMHC, state or private hospital or clinic or established group. Contact Melvin W. Cohen, M.D., 681 Clarkson Avenue, Brooklyn, New York 11203; 212-467-8744.

PEDIATRICIAN, 32 years old, board certified. Currently director of pediatric education. University trained. Excellent background in subspecialties, FLEX and eligible for Texas license. Would like private practice preferably with academic affiliation and with income guarantee or salary first year. Please reply to Ad-707, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701; or call 312-225-8519.

ANESTHESIOLOGIST, BOARD CERTIFIED, 36. On staff northeastern teaching hospital. Experienced in open heart and ICU. Wishes to relocate in group in metropolitan area with good weather. Please reply to Ad-708, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ANESTHESIOLOGY. 32, board eligible. Texas State Board. Four years university training in all types of anesthesia (Baylor College of Medicine). Available from May 1977. Please reply to Jae Hong Yang, M.D., 300 East Mexia #7, Mexia, Texas 76667.

WANT TO RELOCATE to Dallas-Fort Worth or surrounding area within 100 miles as a pathologist (female and university trained). Will be available from July 1, 1977. Want work as a full time pathologist and also part time possible. Please reply to Ad-709, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PULMONARY INTERNIST, 29 years old, ABIM, well experienced in pulmonary functions, respiratory therapy, ICU etc. Seeks part time hospital based and, or solo practice. Community size 20,000 or more. Consider group and association too. Available July 1977. Foreign medical graduate. Practice 70% IM and 30% pulmonary. Contact C. G. Rao, M.D., 122 Ashland Place 6G, Brooklyn, New York 11201.

ANESTHESIOLOGIST: Male, 30 years old. Texas license, Flex, D.O. Seeks full time position, preferably smaller community. Please reply to Ad-711, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

POSITION WANTED: Board-eligible for anesthesiology. University trained, over ten years experience. Seeking position as an anesthesiologist or house physician. Taking FLEX. Curriculum vitae available upon request. Available from July 1977. Please reply to Ad-712, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST: 47 year old, board certified, AP-CP, native Texan. Presently lab director at 250 bed hospital. Desire to return to south or southwest. Excellent relationship with hospital administration and medical staff. References. Will furnish aggressive pathology service for progressive administration and medical staff. Please reply to Ad-713, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

CERTIFIED RADIOLOGIST, FMG, wishes to locate anywhere in eastern half of Texas. Has had prior internal medicine training also. Good in special procedures and nuclear medicine. Please reply to S. I. Ali, M.D., 420 Silver Valley, Munroe Falls, Ohio 44262; 216-688-1190.

For Sale or For Rent

AUSTIN—NEW PROFESSIONAL PARK. Internist, GP, FP, Peds, OB/GYN sought to associate in group setting for solo practice. Physician population has not kept pace with accelerated growth. University town, new hospital. Call or write: Cannon Professional Park c/o 3913 Medical Parkway, Austin, Texas 78756. Telephone 512-451-8489.

NEW ULTRA-MODERN, cedar and glass office space for lease in Northwest San Antonio, one block from loop 410 and one exit from IH 10. Across the road from Park North Hospital, the building is divided into six separate office spaces, four of which are occupied by 4 general dentists, one orthodontist, and three oral surgeons. Up to 4700 sq. ft. available at 60c sq. ft. with a very liberal allowance to finish out to your specifications. Ideal situation for the family practitioner or pediatrician. Contact Mossrock Venture, 2803 Mossrock, Suite 201, San Antonio, Texas 78230.

GROWING NORTHEAST SAN ANTONIO, 55,000 population. No MDs. Five examining rooms, reception, large personal office, carpeted, air conditioned. Rent free details contact W. H. Gibson, 512-656-1166, night 512-651-6449.

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

SAN ANTONIO, TEXAS: Spacious doctor's office available in near West side, five minute drive to Lutheran and Santa Rosa Hospitals. Excellent for Spanish speaking doctor. Rent and utilities free. For additional information call 512-226-5293 or write 1110 El Paso Street, San Antonio, Texas 78207.

FIRE SALE: Undamaged equipment from our clinic. Includes Ritter electric operating table, delivery table, hospital beds, examining tables, and miscellaneous items. Must sell. Write or call Temple Medical Clinic, Temple, Texas 76501; phone 817-773-6886.

WANTED: PHYSICIAN to purchase substantial private practice from retiring general practitioner-surgeon. Office with equipment for sale or lease. Houston, Texas, Rice University-Texas Medical Center Area. Will negotiate price; will consider financing purchaser. For appointment or information, please contact 713-528-4281, Dr. Seale I. Johnson.

X-RAY MACHINE, 130 KV, 300 MA with impulse synchronous timer. Collimeter, mechanical tilt table, cassette holder, bucky, lead screen and shield for wall. All darkroom equipment. Call 512-452-2506.

AUSTIN—MODERN MEDICAL OFFICE SPACE—Professional building near Seton Hospital, Bailey Square Surgical Center, Medical Park Tower; on bus line. 512-478-5621. Sandlin & Company, 308 West 15th Street, Austin, Texas 78701. Nights and weekends call Merrill A. Phillips, CPM, 512-451-8035.

FOR SALE DUE TO DOCTORS DEATH. Modern 2,000 sq. ft. clinic. Combination EENT and allergy practice. Fully equipped office, waiting and exam rooms. Facility easily adaptable to other types of practice. Price and terms negotiable. Prospering East Texas rural area with drawing radius of approximately 90 miles. Dedicated patient load. Additional benefits. Contact Mrs. Albertine Dean, P.O. Box 1089, Crockett, Texas 75835; 713-544-3171.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

PHYSICIAN FINANCING BY MAIL. $5,000 to $50,000. All payments are 100% tax deductible. Can be used for any reason or purpose. For complete details in strict confidence write: Vern Britton, President, Financial Resources Co., Box 502-T, Richmond, Virginia 23204. Or call 804-262-5969.

BACKPACKING/MOUNTAINEERING trips to selected alpine areas of the Rocky Mountains: Colorado, Idaho, Montana and British Columbia. Professional instruction in all phases of wilderness camping. Outback Expeditions, Box 444, Austin, Texas 78767.

ASPEN MUSHROOM CONFERENCE. Diagnosis and treatment of mushroom poisoning. Collection. Identification. Microscopy. Novice and advanced courses. AMA Category I. August 7-12. Hotel Jerome, Aspen, Colorado. Contact: Beth Israel Hospital, 1601 Lowell Blvd., Denver, Colorado 80204; 303-825-2190, ext. 354.

LYNN HOTEL, REDECORATED AND REMODELED. Next time in Dallas, try The Lynn Hotel, directly across from Baylor Hospital, 3401 Gaston Avenue. Call Ms. Marie Hamill, Manager, 214-824-6331.

We have your best interest at heart.

Give Heart Fund

American Heart Association

Advertising Directory

American Physicians Insurance Exchange	27
Beltone Electronics	39
Beverly Hills Hospital	149
Blue Cross-Blue Shield of Texas	12
Burroughs Wellcome Co.	42
Comatic Laboratories	3rd Cover
Dallas Federal Savings & Loan	53
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
Gulf Coast Emergency Physicians	149
Gyne-Tech Instrument Corp.	5
Insurance Corporation of America	43-45
Mead Johnson Laboratories	21
Kelsey-Seybold Clinic	97
Eli Lilly and Company	56
Medical Arts Clinic of Corsicana	34
The Medical Protective Company	97
Pennwalt Corp.	54-55
The Pharmaceutical Manufacturers Association	84-85
The Prudential Insurance Company of America	9
A. H. Robins	73-74
Roche Laboratories	1-2, 40, 50-51, 135
Roerig & Co.	29, 82-83
Scott and White Clinic	Back Cover
Shell Oil Company	149
Smith Kline & French	41
E. R. Squibb & Sons, Inc.	17-20
Starlite Village Hospital	82
Texas Bank and Trust Company	82
Texas Medical Association	
Annual Session	38, 118, 119-122
Automobile Leasing Program	151
European Adventure	25
Memorial Library Fund	131
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchins, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	34
Upjohn	30
Warner-Chilcott	4-5
Wichita Falls Clinic	5
Physicians' Directory	136-145
Classified Advertising	146-148

Publication of an advertisement in *Texas Medicine* is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY

INPATIENT-OUTPATIENT

DEPARTMENT OF ADOLESCENT PSYCHIATRY

A Private 82 bed psychiatric hospital located in Oak Cliff on 18 acres amidst natural wooded surroundings. A multi-approach treatment center of neurologic and all psychiatric disorders. Treatment modalities include Somatic Therapy, Milieu Therapy, Chemotherapy, Individual and Group Therapy and Behavior Modification. Complete facilities for OT-RT under the direction of trained personnel. An individually directed program based on full diagnostic evaluation and actual performance administered by a staff skilled in special education and problems of the adolescent and young adult.

PSYCHIATRY

Jackson H. Speegle, M.D.
Fred H. Jordan, M.D.

Joseph H. Lindsay, M.D.
John T. Holbrook, M.D.

PSYCHOLOGY

George R. Mount, Ph.D.

Tom I. Payton, M.S.
Patrick R. Barnes, M.S.

DIRECTOR OF NURSES
Nita Ivey, R.N.

SOCIAL SERVICES
Beth Rutherford, M.S.W.

COURTESY STAFF

DIRECTOR OF EDUCATION
William E. Nix, Ph.D.

O.T. AND R.T. THERAPY
Director
Chequita Dian Badger, B.S.

1353 N. WESTMORELAND AVENUE, DALLAS, TEXAS 75211 **214 331-8331**

TEXAS
GULF COAST
EMERGENCY PHYSICIANS

Career oriented primary care emergency physicians with additional post graduate training and/or emergency medicine experience. Continuing educational requirements mandatory. Teaching and non-teaching emergency departments available. The only emergency medicine group staffing emergency department-Texas Medical Center. Board eligibility or certification with interest in trauma qualifies for director status. Immediate openings. Guarantee $52,000-$58,000. Fringes: Malpractice, major medical, life, disability income. Houston metropolitan facilities. Excellent schools, churches with a friendly area population. Cultural and educational opportunities. Fresh and salt water. Astrodome, major league sports (football, baseball, ice hockey, golf tournaments, tennis tournaments). Only qualified need apply. Call or Send CV: Gulf Coast Emergency Physicians Association, 3325 Plainview, Suite 7, Pasadena, Texas 77504, 713-943-1918.

Staff Physician

Shell Oil Company's Medical Department, at the Deer Park Manufacturing Complex near Houston, has an opportunity for an experienced physician. Will work with one physician and eight registered nurses.

The individual needs to be strongly oriented to clinical, occupational and preventive medicine. Previous industrial experience desirable, but not mandatory.

Salary competitive and commensurate with qualifications. For confidential consideration, please forward résumé to: P. L. Palfreyman, Department A, The Shell Companies, P.O. Box 2463, Houston, Texas 77001.

The Shell Companies
Shell Oil Co., Shell Chemical Co.,
Shell Development Co.,
Shell Pipe Line Corp.

An equal opportunity employer M F

Letters

Let's Stop Using Throw-aways

Dear Ms. Baker:

Dr. David H. Glenn's excellent article, "The Hidden Energy Crisis: Oil and Gas Raw Materials in Medicine," (*Texas Medicine*, December 1976), helps toward developing a better understanding of the numerous roles of petroleum products in the practice of medicine; however, I feel that his concluding remarks are couched in despair. Asking for further governmental controls, in an attitude of hopelessness, will do nothing to contain price, but rather will increase it.

May I suggest that we reexamine Dr. L. S. Thompson's germane remarks (page 136 of the same issue): "In short physicians really can't solve the problem of high costs, but we can examine customary procedures and explore others which might be equally appropriate but less costly."

The obvious solution is to eliminate the nonreusable items for which there are comparable nonpetrol (nonplastic) products that do not compromise sterility or cost. Such reusable items may be autoclaved, gas- or cold-sterilized literally hundreds of times at negligible labor cost, thereby greatly decreasing haul-away garbage expense and decreasing ecological drawbacks involved in proper disposal of plastic products.

When crude oil sold for $1-2 per barrel, some 25-50 years ago, petroleum and chemical engineers developed new markets for the "new" products which have greatly enhanced our quality of life. However, in relation to plastic items sold to hospital personnel under the guise of "more" sterile, it appears that in the search for newer and better methods the virtues of the old often are forgotten, and a handicap is perpetrated upon one's time with no appreciable benefit to the patient at an increased cost! Nonreusable items have greatly increased hospital costs under the guise that they save labor or are more sterile, or both, yet they are petroleum byproducts.

In these days of energy shortages, physicians should identify these items and ask hospital owners and hospital administrators to stop ordering nonreusable, throw-away plastic items.

Physicians should be grateful to both Dr. Glenn and Dr. Thompson for their articles. I would hope that the AMA Commission on the Cost of Medical Care can further pinpoint this as only one of the many ways to reduce health care industry costs. Further, I would hope that our 30 subspecialty groups would cooperate in identifying the various health care cost abuse areas.

We, as practicing physicians, must remember what Solhzenitsyn has suggested to us: that the American way, the American philosophy, has evolved through identifying right or wrong within legal mandates or so-called legal realism or legal rightism. He suggests that there is a higher sphere of good and evil from which ethics and morality evolve.

Just because something costs more does not mean that it is better, "more" sterile, or a superior product. Let's all examine what we use in our offices, and what we use in our hospitals for which our patients are billed. Let's all get involved in making medical and surgical diagnostic and therapeutic decisions based upon good quality controls rather than the dictums of governmental or hospital administrators who are not licensed to practice medicine.

R. H. Harrison, MD, Bryan.

Letters to the Editor are welcome for consideration in this column. The Board of Publication and the editors reserve the right to excerpt letters in accordance with available space and editorial judgment as recommended by consultants. Neither the editors nor TMA shall be, in any manner or to any extent, directly or indirectly, responsible for views expressed by authors in this column.

If you're sick of visiting auto showrooms and high-pressure salesmen, try our remedy.

You can see every kind of car made — American or foreign — in one place. Yours. Just let us know the cars you're interested in. We'll bring you full color brochures with all the information. Then we'll make all the leasing arrangements. It's easy — and your new car will be just what the doctor ordered.

There are more advantages too:

- Tax write-offs
- Low lease costs
- Positive cash flow
- No record-keeping necessary
- Custom-tailored leases
- Total maintenance of Lincoln-Mercury products.

Texas Medical Association Automobile Lease Program

Underwritten by:

Bankston Rentals, Inc. • 4747 LBJ Freeway • Dallas, Texas 75234 • 214/233-1441
Southwest Motor Leasing, Inc. • 6737 Southwest Freeway • Houston, Texas 77074 • 713/777-3816

Editorials

THE C-T SCANNER: WHO DECIDES?

Doctors, lawyers and various chiefs do not share the same opinion of the computerized axial tomographic (CAT, or C-T) scanner which has been heralded as a revolutionary discovery in the field of radiology, perhaps as important as Roentgen's discovery of x-rays in 1895. As is true with many discoveries, emotions are mixed, and reaction to this machine is no exception. Critics have abounded in this country. Initially, the beneficial diagnostic information was questioned. This position was untenable and thus easily refuted.

An article in the Jan 31, 1977 issue of *American Medical News,* by Mr. Roy Petty, indicates a shift in the attack tactics by 81 medical planners who recently met in Hilton Head, SC, under the sponsorship of the Blue Cross Association. The charges now appear to center around misuse of the machines and the profit motive. The first charge is ambiguous at best, and the second reveals a characteristic ignorance of policy-makers who are removed from the scene of treating patients. Physicians who refer the patients to hospital radiology departments derive no monetary benefit from these diagnostic examinations. However, the reported concern of this group was cost effectiveness, not quality of care. It should be obvious that the detractors of this diagnostic system, as well as other medical services, dwell on numbers rather than clinical benefits. If the C-T scanner is a worthy instrument, justification should be possible in terms of cost and useful clinical information.

Unequivocally, the C-T scanner has changed the diagnostic pattern for intracranial evaluation. Information previously gathered, largely by indirect evidence, can now be displayed in clearly recognizable form, equivalent to a 1-cm slice obtained from a whole brain specimen. Armed with the basic technology and enthusiastic acceptance of reconstructed brain images, the manufacturers immediately proceeded to develop whole body scanners. The initial machines required several minutes to complete a scan, thus producing images degraded by motion. In less than four years of general clinical use, the era of third generation scanners has arrived. Scan times of 5 to 20 seconds, now available on many machines, will enhance clinical usefulness and significantly reduce the total cost per patient.

Reduction of cost has direct appeal to the public, hospital administrators, government, and third-party planners. However, because of deficit spending concepts advanced by convincing economists, we have become skeptical of the "spend more, have more" philosophy. Therefore, at a time when cost control has attracted national attention and medical costs are escalating, how will we justify expenditures of $250,000-$679,000 per machine? The site preparations and annual operating expenses add significant dollars to the basic cost. Yet, demand has been so great that some states, through planning and certifying agencies, have instituted a moratorium in order to evaluate the proliferation of these machines.

Why, indeed, do we need these machines? Aside from the trite answer of offering the patient an alternative method of diagnosis which poses no threat to his life or well-being, there are other worthy considerations. The most urgent of these, interestingly, is patient cost. An average C-T examination costs between $200 and $350. The higher charge represents repeat scanning with enhancement of the image with standard contrast materials. Angiography for diagnosing similar conditions averages between $315 and $425, utilizing local anesthesia. Obviously, the costs are significantly higher when general anesthesia is used. While it is true that some patients who have C-T scans will subsequently have angiograms, these usually will be for the purpose of providing additional detailed information. The patient with a negative scan

will frequently be spared an invasive procedure.

Most serious efforts to reduce medical costs hinge on reduction of patient days in hospitals. Available reports indicate that this goal has been accomplished with inpatients when the primary diagnostic mechanism was a C-T scanner. However, the major thrust of this program involves diagnostic workups on outpatients. Diagnostic procedures for real or suspected neurological deficits traditionally have required hospitalization. Although some institutions have used angiography safely on outpatients, this practice has not become universally accepted. Pneumoencephalography certainly qualifies as a definite inpatient procedure. Suspected mass lesions involving the liver, pancreas, and retroperitoneal structures frequently require invasive diagnostic procedures, including exploratory surgery. Therefore, utilization of a C-T scanner to give equal or superior information on an outpatient basis would certainly permit giant strides in the proper direction. Most hospitals are currently reserving a portion of the machine schedule each day to accommodate outpatients. This demand will grow as the units become more accessible and physicians fully appreciate the benefits to their patients.

Now, are the costs for the C-T scanner isolated or additive? If purchase of additional special procedures or isotope equipment can be eliminated, the cost is isolated. This is an important consideration when a cost of $350,000-$500,000 for an angiographic suite is not unusual. Also, because more examinations can be performed daily utilizing a scanner rather than angiography equipment, the hospital amortization posture is improved. Should angiography and pneumoencephalography facilities be downgraded or abandoned? The obvious answer is no, although C-T scans have virtually eliminated pneumoencephalograms in hospitals that have capabilities for both procedures. However, proliferation of angiography facilities, which has been occurring, will undoubtedly be slowed. The reduced demand for these services should prolong the useful life of existing equipment.

Perhaps, with the advent of the C-T scanners, cooperative efforts can develop between institutions to avoid duplication of facilities. All hospitals will not desire a scanner, nor can they justify the expenditure on the basis of patient demand. To date, cooperation appears to be excellent. In Texas, guidelines have been established for the purchase of equipment which detail the minimal requirements for physician expertise and hospital capabilities. This approach is reasonable, and it should allow an orderly process in providing diagnostic excellence to all our citizens. The service will certainly not be inexpensive, although by current standards, anything that costs less and yet provides greater benefit certainly merits fair consideration.

All of the critics will never be silenced. However, through discriminating use by referring physicians, diagnosis utilizing the C-T scanner can proceed to fulfill its enormous potential.

James E. Harrell, MD, Houston.

EXPANDED ROLES FOR MEDICAL SCHOOLS

Medical schools are creatures of society. Although created for specific purposes, many elements of society feel that the schools should be responsive to the total needs of society. Before the dramatic changes in medicine that occurred in the late 1940s and early 1950s, medical schools received little attention from legislators or the public. As medicine's capabilities grew, there were resultant changes in medical practice, such as increased specialization and increased use of the hospital as a diagnostic facility. These changes led to attempts to alter the

practice of medicine, and the US Congress and state legislatures focused their attention on medical schools.

In the early 1960s, the first health manpower bills were passed. Initially these bills aimed at increasing the supply of physicians. Large sums of money were made available for construction of facilities and the addition of faculty. All medical schools increased their enrollments dramatically, and new medical schools came into being. For example, in 1964, the entering class size at The University of Texas Medical Branch was 150, and in 1971 it increased to 203, an increase of 53 students or 35% per class. In Texas in 1968, there were three medical schools, and in 1977 there are seven plus a school of osteopathic medicine. In 1968, 320 MD degrees were awarded in Texas, and in 1976, eight years later, 717. By 1982, nearly 1,100 degrees will be awarded each year.

The impact on medical schools has been striking. Faculties have increased in size. Student bodies have become large. Curriculum change has become the byword of the faculty and students. Federal and state regulation of medicine has led to increasing numbers of employees to deal with these regulations. Court decisions have led to increased formalization of evaluation procedures, and academic health centers have developed their own bureaucracies.

A second aspect of the change in medical schools has been in-house staff programs. New specialties such as family medicine and therapeutic radiology have developed, and others such as thoracic surgery have greatly expanded. In 1964, UTMB had 190 interns and residents, while in 1976-1977, there are 339. Furthermore, most medical schools now have affiliated programs in other hospitals, and the number of these is growing. Indeed, in Texas, medical schools are responsible for more than 80% of graduate medical education.

The past five years have witnessed increasing pressure in continuing medical education. Approximately 18 states have laws requiring continuing education for reregistration of licenses. The American Board of Family Medicine has mandatory recertification, and nearly every other board has plans for such. Nationally, medical schools sponsor nearly 50% of continuing education courses.

Finally, there has been great political pressure for medical schools to solve societal problems such as the distribution of physicians, access to health care, and costs. Legislative "solutions" include such things as the fifth pathway program, residency restrictions, and attempts to mandate satellite clinics to deliver medical care. In the current Texas Legislature there are bills mandating service by graduates of Texas medical schools and residency programs, and there is little indication that these political pressures will diminish. It is critical to emphasize that these political interventions result in an alteration of the role of medical schools and therefore a diminished capacity to be effective in their primary mission.

The medical schools in Texas are working closely with the Texas Medical Association, the Texas Academy of Family Physicians, and other elements of medicine to develop solutions to Texas problems. Some examples of this include the TAFP annual meetings held in conjunction with medical schools, TMA Task Force on Graduate Medical Education and Access to Health Care, and the American Medical Association's creation of a Section on Medical Schools, which was supported by the TMA.

It must be remembered that the primary mission of medical schools is to provide a high quality, effective educational program for medical students. Other activities must complement and not detract from that mission.

Together, medical schools and organized medicine can develop solutions to our problems. Significant steps are under way and deserve the support of all physicians.

Edward N. Brandt, Jr., MD, PhD, Executive Dean, The University of Texas Medical Branch, Galveston.

Jun77

TexasMedicine

Help for medical acronym aphasia

Attorney general rules on professional liability legislation

Coronary artery bypass and other vascular surgery

Facial nerve paralysis

Hyperactivity

Mental health code needs better provisions for emergencies

THE LIBRARY
ACQUISITIONS DIV.
UNIV. OF CALIFORNIA, S. F.
SAN FRANCISCO CA 94143
##

LIBRARY
U.C. SAN FRANCISCO
JUN 15 1977

Torbett-Hutchings-Smith Memorial Hospital
and Torbett-Hutchings-Smith Clinic

322 Coleman Street — Marlin, Texas 76661 — Telephone: 883-3561

Post Office Box 60

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.
Cecil A. McRee, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

VASCULAR SURGERY
Cecil A. McRee, M.D., F.A.C.S.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

TRAUMATIC AND ORTHOPEDIC SURGERY
D. R. Swetland, M.D., F.A.C.S.

ALLERGY
S. W. Hughes, M.D.

CARDIOLOGY
W. F. McKinley, Jr., M.D.

OBSTETRICS AND PEDIATRICS
William Pickvance, M.D.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
Ronald E. Henderson, Jr., M.D.
David M. McTaggart, M.D.
S. M. Bunn, Jr., M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

NEUROSURGERY
Harry H. Slade, M.D., F.A.C.S.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Associate Administrator:
Larry Parsons

Director-Coordinator, Nursing Service:
Vera Bee, R.N.

Director of Patient Care:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street — DALLAS, TEXAS 75211 — Telephone 823-4151

INTERNAL MEDICINE
John B. Allen, M.D., D.A.B.I.M.
Morris E. Magers, M.D., D.A.B.I.M.
Channing Woods, M.D.
Richard C. Stone, M.D., Gastroenterology
Landon W. Stewart, M.D., D.A.B.I.M.
Cloyce L. Stetson, Jr., M.D., D.A.B.I.M.
David S. Sowell, III, M.D., D.A.B.I.M., Cardiology
Don E. Cheatum, M.D., D.A.B.I.M., and D.A.B. Rhu, F.A.C.P.
W. Mark Armstrong, M.D., D.A.B.I.M.
Sam W. Waters, M.D.
George E. Thomas, M.D., D.A.B.I.M.
Steven P. Bowers, M.D., D.A.B.I.M.

ORTHOPEDIC SURGERY
George S. Phalen, M.D., D.A.B.O.S., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
John B. Miller, III, M.D.
Vernie D. Bodden, M.D.

PEDIATRICS
Halcuit Moore, M.D., D.A.B.P., F.A.A.P.
P. E. Luecke, Jr., M.D., D.A.B.P., F.A.A.P.
Larry Gray, M.D., D.A.B.P., F.A.A.P.

GENERAL SURGERY
George P. Fosmire, M.D., D.A.B.S., F.A.C.S.
Miller S. Bell, M.D., D.A.B.S., F.A.C.S.

UROLOGY
Harry M. Spence, M.D., D.A.B.U., F.A.C.S.
William H. Hoffman, M.D., D.A.B.U., F.A.C.S.
Richard B. Dulany, M.D., D.A.B.U., F.A.C.S.

RADIOLOGY
Raymond W. Burford, M.D., D.A.B.R.
Joe B. Caldwell, M.D., D.A.B.R.
James B. Evans, M.D., D.A.B.R.

DERMATOLOGY
William N. New, M.D., F.A.A.D., F.A.C.P.

OTOLARYNGOLOGY AND OTOLOGIC SURGERY
D. W. Shuster, M.D., D.A.B.O.

OPHTHALMOLOGY
R. M. Burnside, M.D., D.A.B.O.
James M. Copps, M.D., D.A.B.O.

DENTISTRY AND DENTAL SURGERY
J. Boyd Hollabaugh, D.D.S.
William F. Walton, D.D.S.
George D. Blake, D.D.S.
Larry L. Cowsert, D.D.S.

ADMINISTRATION
C. H. Rosamond, Administrator
Jack Green, Associate Administrator

DIRECTOR OF NURSING SERVICE
Miss Billye J. Norris, R.N.

INACTIVE STATUS
George M. Underwood, M.D., D.A.B.I.M., F.A.C.P., Gastroenterology
William H. Potts, M.D., F.A.C.P., Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics and Gynecology
Adam D. Green, M.D., Surgery
B. Celia Slaughter, M.D., D.A.B.P., F.A.A.P.
John B. Bourland, M.D., D.A.B.O.G.

THE ANXIETY-SPECIFIC.

- a predictable pattern of patient response
- seldom associated with serious side effects, in proper dosage
- rarely interferes with mental acuity
- used concomitantly with many primary medications
- three dosage strengths meet most patient needs

LIBRIUM® ℞

chlordiazepoxide HCl/Roche

5mg, 10mg, 25mg capsules

Libritabs® (chlordiazepoxide) available in 5 mg, 10 mg and 25 mg tablets.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) *Capsules*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) *Tablets*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see following page.

THE ANXIETY-SPECIFIC.

Since its discovery in the research laboratories at Roche, Librium has been the object of ongoing pharmacologic and clinical investigation.

The published record on Librium is enormous. So large, in fact, we put it into a computer literature retrieval system to make it more accessible in answering your inquiries.*

It's a record that reveals a consistent pattern of patient response. A highly favorable benefits-to-risk ratio. And minimal interference with many primary medications.

Doing one thing well. Basically, that's what Librium is all about.

LIBRIUM® IV
chlordiazepoxide HCl/Roche

ROCHE

*If you have a question about Librium or any other Roche product, write to Professional Services, Roche Laboratories, Nutley, New Jersey 07110.

Please see preceding page for a summary of product information.

Texas Medicine
VOL 73 JUNE 1977

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION
Don G. Harrel, MD, Dallas
Chairman
Sam N. Key, MD, Austin
Vice-Chairman
Walter A. Brooks, MD, Quanah
Secretary
R. Harvey Bell, MD, Palestine
C. W. Yates, MD, Rosenberg
Paul R. Meyer, MD, Port Arthur
Merle W. Delmer, MD, San Antonio

TMA OFFICERS
John M. Smith, Jr., MD, San Antonio
President
A. J. Gill, MD, Dallas
Vice-President
Mylie E. Durham, Jr., MD, Houston
President-Elect
James G. Morris, MD, Lubbock
Secretary
Ben R. Keller, Jr., MD, Arlington
Treasurer
C. Lincoln Williston, Austin
Executive Director

EDITORIAL STAFF
1905 N Lamar Blvd, Austin 78705
Telephone: 512-477-6704
Marilyn Baker, Executive Editor
Rae Vajgert, Assistant Executive Editor
Elise David, Assistant Editor
Donna Billie, Editorial Assistant
Patty Mullins, Secretary

ADVERTISING STAFF
1801 N Lamar Blvd, Austin 78701
Jon R. Hornaday, Advertising Director
Anne Shelnutt, Advertising Manager

SCIENTIFIC PUBLICATION COMMITTEE
C. W. Daeschner, MD, Galveston
Chairman
Robert Askew, MD, Austin
Vice-Chairman
Ernest C. Butler, MD, Austin
Jesse D. Cone, MD, Odessa
George A. Gates, MD, San Antonio
Tracy R. Gordy, MD, Austin
R. Maurice Hood, MD, Austin
Paxton H. Howard, Jr., MD, Temple
Joseph Lancaster, MD, Austin
Francis E. McIntyre, MD, Austin
Paul C. Peters, MD, Dallas
Richard S. Ruiz, MD, Houston
H. Irving Schweppe, Jr., MD, Houston
Theodore P. Votteler, MD, Dallas

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS
1801 N Lamar Blvd, Austin 78701
c/o Ray Riggs, Business Manager
$4 per year for members; $8 for non-members; $14 for foreign; $6 for libraries, hospitals, and universities; $4 for medical students. Single copy: $1.25.

CHANGE OF ADDRESS
1801 N Lamar Blvd, Austin 78701
c/o Edward R. Bierschenk, Membership Director

Copyright 1977 by the Texas Medical Association. Owned and issued monthly by the Association.

Second Class Postage paid at Fort Worth, Texas, under act of March 3, 1879. Publication number 79660.

Contents

Scientific Articles

39 What has happened to coronary artery bypass? Don W. Chapman, MD; William L. Winters, Jr., MD; George C. Morris, MD; Gerald M. Lawrie, MD

44 A long-term clinical assessment of patients with 'in-hospital crescendo angina' treated by emergency vein grafting C. J. Lambert, MD; Robert S. Firpo, MD; Aaron Estrera, MD; Maurice Adam, MD; J. Peter Thiele, MD; Gerald F. Geisler, MD; Ben F. Mitchel, MD

49 Anterior tibial arteriovenous fistula following closed fracture of the tibia Martin L. Dalton, Jr., MD; Donald K. Wheeler, MD; Philip E. Duvall, MD; Donald L. Bricker, MD

52 Evaluation and treatment of facial nerve paralysis James A. Crabtree, MD

61 Etiology of traumatic spinal cord injury: statistics of more than 1,100 cases R. Edward Carter, Jr., MD

68 The hyperactive child: review and suggested management Patrick Casey, MD

Features

81 Help for those with medical acronym aphasia

87 Scientist uses citation indexing to predict winners of the Nobel Prize

Editorials

118 Texas Mental Health Code lacks adequate emergency provisions Robert L. Zapalac, MD

News

7 More than 6,300 attend TMA's 110th Annual Session

11 TMA delegates to the AMA will introduce six resolutions

16 Texas is seeing results of emergency medical services

21 Sen Andujar becomes governor for a day

22 American health care is improving, foundation says

24 Ad Hoc organization committee will meet July 8-9

Departments

25 Capital Comments

32 Meetings

35 Continuing Education

80 Information for Authors

91 Medicine and the Law

93 Medical Newsmakers

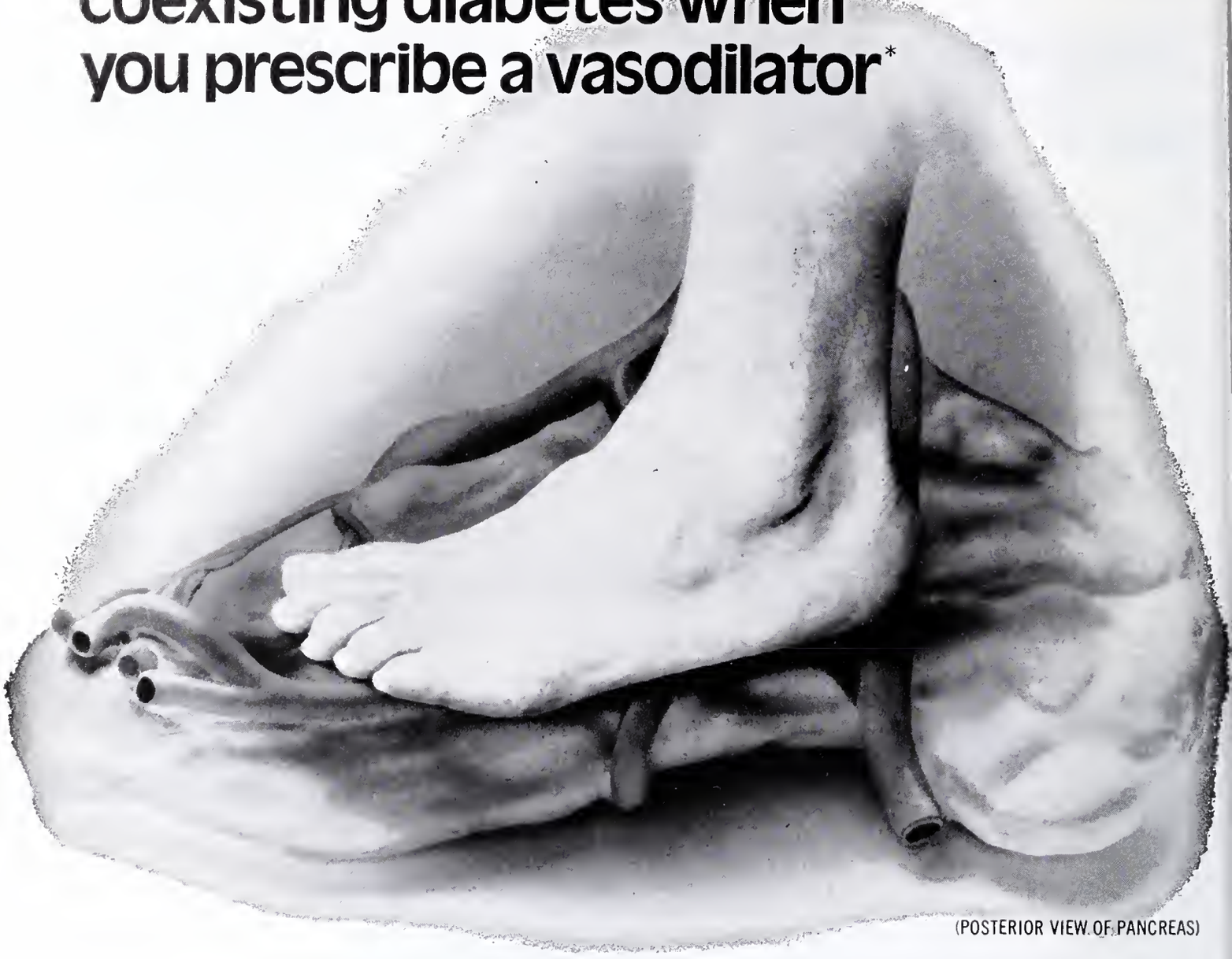
94 Medicine and Literature

97 Deaths

On The Cover

AAMC, ACS, ADA, DOJ, ERDA, LOS, MSA. What does it all mean? Help for those with medical acronym aphasia begins on page 81.

consider the effect on coexisting diabetes when you prescribe a vasodilator*



(POSTERIOR VIEW OF PANCREAS)

no interference in the management of the diabetic patient has been reported with

VASODILAN®
(ISOXSUPRINE HCl)

the compatible vasodilator TABLETS, 20 mg.

*__Indications:__ Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg
Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily.
Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

Mead Johnson LABORATORIES

© 1977, MEAD JOHNSON & COMPANY, EVANSVILLE, INDIANA 47721 U.S.A. MJLS-4117R1

If you're sick of visiting auto showrooms and high-pressure salesmen, try our remedy.

You can see every kind of car made — American or foreign — in one place. Yours. Just let us know the cars you're interested in. We'll bring you full color brochures with all the information. Then we'll make all the leasing arrangements. It's easy — and your new car will be just what the doctor ordered.

There are more advantages too:

- Tax write-offs
- Low lease costs
- Positive cash flow
- No record-keeping necessary
- Custom-tailored leases
- Total maintenance of Lincoln-Mercury products.

Texas Medical Association Automobile Lease Program

Underwritten by:

Bankston Rentals, Inc. • 4747 LBJ Freeway • Dallas, Texas 75234 • 214/233-1441
Southwest Motor Leasing, Inc. • 6737 Southwest Freeway • Houston, Texas 77074 • 713/777-3816

News in brief

Annual Session More than 6,300 persons attended TMA's Annual Session in Houston May 11-15. John M. Smith, Jr, MD, San Antonio, was installed as the new TMA president and Mylie Durham, MD, Houston, was installed as the new TMA president-elect . . . 7

AMA House of Delegates Texas Medical Association Delegates to the American Medical Association House of Delegates meeting June 18-23 in San Francisco will introduce six Texas resolutions. The resolutions include National Health Insurance policy and changes in Medicare regulations . . . 11

Laetrile The Texas Legislature and Gov Dolph Briscoe have approved a bill allowing the production and use of Laetrile in Texas. However, the Food and Drug Administration still maintains that no scientific evidence which indicates that Laetrile has any potential value in cancer management has ever been found . . . 14

Emergency medical services Texas is seeing the results in more lives being saved every day because of statewide emergency medical services programs, says the Deputy Director of the Texas Department of Health Resources . . . 16

American health American medical and health care are getting better, show studies cited by the Robert Wood Johnson Foundation. The studies show considerable progress in medical and health care in the past 15 years . . . 22

News in detail

More than 6,300 attend TMA's 110th Annual Session

More than 6,300 persons attended TMA's 110th Annual Session in Houston May 11-15.

Speakers at the annual TMA meeting included Richard E. Palmer, MD, president of the American Medical Association, James H. Sammons, MD, executive vice president of the American Medical Association, and Rep Paul G. Rogers (D-Fla), who is serving his eleventh term in Congress and his sixth year as chairman of the House Public Health and Environment Subcommittee.

During the meeting John M. Smith, Jr., MD, San Antonio, was installed as the new TMA president and Mylie Durham, MD, Houston, was installed as the new TMA president-elect.

Pictures, details and more Annual Session stories will be included in the July issue of *Texas Medicine*.

Government regulations cost $2.9 billion in fiscal year 1976

The direct cost of federal government regulation on business hit a high of $2.9 billion in the fiscal year of 1976, shows a study conducted at Washington University, St. Louis.

The study, presented in the March 7, 1977 *Congressional Record,* shows that on the basis of appropriations already enacted, these costs are estimated to reach $3.5 billion in the current fiscal year, a 21% increase.

"The budget for fiscal 1978 transmitted by the outgoing Ford Administration would bring the annual total federal regulatory cost to approximately $3.8 billion next year, an 85% rise over 1974 level," according to Prof. Murray Weidenbaum, Director of the Center for the Study of American Business at Washington University, and Robert DeFina, a graduate student in the University's Department of Economics.

The study shows that the budgets of the regulatory agencies continue on a steadily upward growth trend. Any additions that will be proposed by the Carter Administration—such as a new consumer advocacy agency or a strip mining control law—would push these numbers higher still, if not offset by reductions in other areas, the study says.

"The most expensive sectors of federal regulatory activity are not the traditional economic regulating commissions which typically focus on an individual industry.

"Rather the largest budgets have been assigned to a broad category of social activities including environment, energy, and consumer safety and health; the major agencies in this latter group include the Environmental Protection Agency, the National Highway Traffic Safety Administration, the Food and Drug Administration, and the Animal and Plant Health Inspection Service. The jurisdiction of these agencies generally extends to the great bulk of the private sector, including manufacturing and service industries which are not generally thought of as regulated," the study concludes.

Conference committee studies professional liability legislation

Senate and House conference committee members were appointed in May to consider CSHB 1048, the Medical Liability and Insurance Improvement Act of Texas.

Members of the Conference Committee include Sens Ray Farabee, Wichita Falls, Don Adams, Jasper, Max Sherman, Amarillo, Oscar Mauzy, Dallas, and Grant Jones, Abilene. The conference committee includes Reps Pike Powers, Beaumont, Bob Davis, Irving, Tom Uher, Bay City, Don Henderson, Houston, and Mike Ezzell, Snyder.

More information on action taken by the Texas Legislature concerning professional liability insurance will be included in the July issue of *Texas Medicine*.

Tyler cancer control program hospitalizes 116 former plant workers

A cancer control program in Tyler has hospitalized 116 of approximately 672 former workers of an asbestos plant for lung-related problems.

The Tyler Asbestos Workers Program is located at the East Texas Chest Hospital, where former workers of a Pittsburgh-Corning Corporation plant undergo a complete physical examination every six months.

In 1972, Pittsburgh-Corning closed its asbestos pipe insulation plant near Tyler, when the National Institute for Occupational Safety and Health ordered the company to improve its ventilation and dust control system.

"Several studies have shown that workers exposed to asbestos are more likely to develop malignant disease," said Dr George Hurst, an investigator for the Tyler Asbestos Workers Program. The program is funded by a grant from the National Cancer Institute to the Texas Chest Foundation.

How asbestos fibers in the lung act to cause cancer is not known, but from previous studies the following facts have been established. Exposure to inhaled asbestos fibers does present a health hazard. Asbestos workers who smoke two packs of cigarettes or more each day have an eight times greater risk of developing lung cancer than the average smoker who has not been exposed to asbestos, and a 92 times greater risk over non-smokers who have not been exposed to asbestos. In most cases, there is about a 20-30 year dormant period before the effects of asbestos fibers in the lung begin to appear.

Working in conjunction with the program is the Smoking and Health Information Program that encourages current smokers to abandon or modify smoking habits and discourages others from initiating or resuming the habit.

The Smoking and Health Information Program is funded jointly by a contract from the US Center for Disease Control to the University of Texas M.D. Anderson Hospital and Tumor Institute and by a health education subcontract from the National Cancer Institute to the Texas Chest Foundation.

Earlier information about the Tyler Asbestos Workers Program was included in two articles, "Sputum cytopathological findings in former asbestos workers," and "The Small Beautiful Time Bomb," in the January 1976 issue of *Texas Medicine*.

Blue Cross changes made after Medicaid contract expires

The Blue Cross and Blue Shield of Texas contract with the State Department of Public Welfare as the health insuring agent for the Medicaid Program expired Dec. 31, 1976.

The new contractor is National Health Insurance Company, a subsidiary of Electronic Data Systems Federal.

Certain changes are the result of the termination of the Blue Cross and Blue Shield of Texas contract, said Louis W. Conradt, MD, Vice President, Medical Director of the company. Medicaid subjects and problems will not be addressed at Blue Cross and Blue Shield Workshops.

The Provider Relations Department will not be discussing Medicaid at the time of the Provider Relations call on the physicians office.

Medical profiles will have to be secured from National Health Insurance Company in Austin.

Medicaid claims questions will be handled by the National Health Insurance Company.

Palmer Drug Abuse Program opens center in Austin

The Palmer Drug Abuse Program has opened a drug abuse center to help Austin youths. The new center is at Seventh and San Jacinto Streets in Austin.

With headquarters in Houston, the Palmer Drug Abuse Program is a six-year-old nonprofit program which specializes in providing free services to help young people who have drug problems. The program is supported by private donations from individuals, groups and companies.

The Palmer Drug Abuse Program also has centers in Houston, Dallas, and Beaumont.

TEXAS MEDICAL ASSOCIATION

INSURANCE PROGRAM

- DISABILITY INCOME
- OFFICE OVERHEAD
- MAJOR MEDICAL
- PERSONAL ACCIDENT
- LIFE INSURANCE

administered by

TEXAS MEDICAL ASSOCIATION INSURANCE TRUST
1901 N. Lamar Blvd., Austin, TX 78705, (512) 476-6551

Prudential
Group Insurance

TDHR conducts program to make rabies vaccine available

The Texas Department of Health Resources (TDHR) is conducting a program to make Human Rabies Immune Globulin (HRIG) readily available for use by physicians.

The vaccine is distributed primarily on a reimbursable basis with the objective being to deliver it rapidly to the patient who urgently needs protection against rabies, according to Charles A. Webb, Jr, MD, Chief of the Bureau of Communicable Disease Services, TDHR.

The old-style use of horse anti-rabies serum should be terminated, Dr Webb says, and HRIG should be used in each case where a person was exposed to possible or proved rabies. If vaccine is used, then HRIG is mandatory, he said.

HRIG is antirabies gamma globulin concententrated by cold ethanol fractionation from plasma of hyperimmunized human donors, according to TDHR and the Center for Disease Control. Neutralizing antibody content is standardized to contain 150 International Units (IU) per milliliter. It is supplied in 2-ml (300 IU) and 10-ml (1,500 IU) vials for pediatric or adult use.

Local pain and slight febrile response may follow receipt of HRIG. Although not reported for HRIG, antineurotic edema, nephrotic syndrome, and anaphylaxis have been reported rarely after routing injection of immune serum globulin (ISG). These reactions occur so rarely that the causal relationship between ISG and these reactions is not clear.

In the management of biting animals, a healthy domestic dog or cat that bites a person should be confined and observed by a veterinarian for 10 days. Any illness in the animal should be reported immediately to the local health department. If signs suggestive of rabies develop, the animal should be humanely killed and its head removed and shipped under refrigeration to a qualified laboratory designated by the local or state health department for examination.

If the brain is negative by fluorescent antibody examination for rabies, one can assume that the saliva contains no virus, and the bitten person need not be treated, TDHR says.

Passive antibody, HRIG is administered only once at the beginning of antirabies therapy. The recommended dose of HRIG is 20 IU/kg or approximately 9 IU/lb body weight.

Up to half the dose of HRIG should be thoroughly infiltrated around the wound and the rest administered intramuscularly in the buttocks.

Since HRIG partially suppresses active production of antibody, no more than the recommended dose of HRIG should be given, and the two booster doses of vaccine must be given.

Dr Webb wishes to advise physicians of the need to stop using horse serum and to impress upon them the need to use HRIG in all cases in which vaccine is to be used.

He wishes to provide information to assist physicians in the very difficult decision of whether or not to initiate treatment. At present, many persons are treated, often with vaccine alone, who should not receive treatment at all, he said.

Dr Webb wants to inform physicians to obtain serum for anti-rabies antibody titer at the termination of the vaccine course. In some 10% of individuals, the currently available Duck Embryo Vaccine fails to produce satisfactory immunity, he said. These persons should be discovered and treated with the new "experimental vaccine" HDCV, which is more efficacious, Dr Webb said.

The TDHR program has stockpiled HRIG in different Texas locations. HRIG may be released only on order of the Regional Medical Directors or their surrogates.

Following is information about the locations: Public Health Region 1, 300 Victory Drive, Canyon, contact Jerry DeSha; Public Health Region 2, 3411 Knoxville, Lubbock, contact Dr John P. Board, director, after hours contact Sue Barfoot 795-9667 or Dr Evers 792-5987; Public Health Region 3, storage at Hotel Dieu Hospital (Pharmacy), 1014 N. Stanton, El Paso, contact John L. Bradley, MD, director, Public Health Region 3; Public Health Region 4, Second Floor, Old Courthouse, Abilene, contact Dr. Myron J. Woltjen, director, Public Health Region 4; Public Health Region 5 (final distribution points pending) temporary, George Russell, Chief Staff Service Office, 2000 E. Randol Mill Rd., Suite 611, Arlington, contact Hal J. Dewlett, director, Public Health Region 5; Public Health Region 6, storage at Scott & White Memorial Hospital, Poison Control Center, contact Bob Crider, George J. Dellaporatas, MD, director, Public Health Region 6; Public Health Region 7, distribution centers St Mary Hospital, Emergency Room, Port Arthur, Medical Center Hospital, Emergency Room, Tyler, Texas, 75701, Wadley Hospital, Emergen-

cy Room, Texarkana, Texas, 75501, and Wodland Heights Hospital, Emergency Room, Lufkin, contact Marietta Crowder, MD, director, Public Health Region 7; Public Health Region 8, Poly Ryon Memorial Hospital, Richmond, contact Director of Nursing/Shift Supervisor; Public Health Region 9, Rodger G. Smythe, MD, director, Public Health Region 9, Old Memorial Hospital Building, Garner Field Rd, Uvalde; Public Health Region 10, distribution now being handled by Dr Musgrave, 512-423-0130 and 512-425-3556 until distribution points are firmly established, distribution points are Harlingen State Chest Hospital, Memorial Medical Center, Corpus Christi, and Laredo-Webb Health Department, Laredo.

For more information contact Dr Charles Webb, at the Texas Department of Health Resources, 1100 West 49th Street, Austin, Texas 78756, 512-458-7111.

TMA delegates to the AMA will introduce six resolutions

Texas Medical Association delegates to the American Medical Association House of Delegates meeting June 18-23 in San Francisco will introduce six Texas resolutions.

The group will introduce a resolution reaffirming the AMA guidelines for National Health Insurance (NHI) proposals. The resolution asks that the AMA House of Delegates reaffirm the AMA's active participation in the NHI debate and that the AMA continue to work to preserve private medical and health care and its financing by building upon the existing system of private health insurance with minimum federal involvement.

In another resolution the Texas delegation will ask the AMA to work to change Medicare regulations or law to permit a consulting physician to certify that he has rendered the service for which payment is requested, and to receive such payment without having to obtain the patient's signature on the claims form.

Recognizing the value of services provided by hospital-based social workers in assisting Medicare patients, the Texas delegates will ask the AMA to urge the Bureau of Health Insurance to permit charges for social services to be billed to the individual patient requiring and receiving these services.

The resolution also asks the AMA to solicit support of other interested organizations such as the American Hospital Association, the National Association of Social Workers, the National Federation for Clinical Social Workers, and others in accomplishing this objective.

The Texas delegation is also asking the AMA to urge the Bureau of Health Insurance and private insurance companies to accept cardiac rehabilitation services rendered in the physician's office or clinic as legitimate and needed, and to authorize reimbursement for these services.

The Texas delegation will present two resolutions asking the AMA House of Delegates to express its sorrow and extend its deepest sympathy to the families of Joe T. Nelson, MD, who died April 11, and N. L. Barker, MD, who died May 15.

TMA Trustee Joe T. Nelson, MD, dies

Joe T. Nelson, MD, a member of the Texas Medical Association and the American Medical Association Board of Trustees, died of cancer April 11.

Dr Nelson, 53, had been a family practitioner in Weatherford, Texas.

He had also served as a Texas Medical Association delegate to the AMA. He was a past president of the Southern Medical Association and former member of the TMA Board of Trustees.

He was a member of the University of Texas System Board of Regents, and from 1970-1974 was a member of the board of the American Medical Political Action Committee.

In 1963 he was named Weatherford's outstanding citizen.

Past TMA president N. L. Barker, MD, dies

Former TMA president N. L. Barker, MD, died in a Houston hospital May 15.

Dr Barker, president of TMA from 1975-1976, was also a member of the Texas State Board of Health.

The Paris family practitioner had also been a member of the TMA Executive Board, the TMA Board of Trustees, and a TMA delegate to the American Medical Association.

Dr Barker was a chartered fellow of the American Academy of Family Physicians, and served as president of St Joseph's Hospital in Paris.

Texas Medical Association

Invites You On An

Orient Adventure

Two weeks in exotic Japan and Hong Kong
Departing Houston & Dallas-Fort Worth on October 12, 1977

Come with us for a relaxing, do-as-you-please holiday in the Orient. See snow-capped Mt. Fuji and the glitter of the Tokyo's Ginza. Visit lush green Hakone and Nikko National Parks. See spectacular Hong Kong Harbor and colorful Kowloon. Shop for tailor-made clothes at bargain prices. Find tempting buys in jade, pearls, silk, electronics and cameras. It all awaits you.

Orient Adventure includes: Direct chartered jet flights, deluxe hotels, American breakfasts, dinners at a selection of the finest restaurants plus a generous 70 pound luggage allowance. A great trip. $1568 a great value.

Send to: Texas Medical Association
Orient Adventure
1801 North Lamar Blvd
Austin, Texas 78701

Enclosed is my check for $_____ ($100 per person) as deposit.

Name(s) _____

Home Address _____

City _____ State _____ Zip _____

A Non-Regimented INTRAV® Deluxe Adventure

TDHR recommends five-dose polio immunization series

The Texas Department of Health Resources (TDHR) continues to recommend a different polio immunization schedule than the American Academy of Pediatrics because of the relatively greater risk of polio in Texas.

The American Academy of Pediatrics and prominent individuals have been recommending the reduction of the standard polio immunization schedule to provide for only two doses during the first six months of the series.

The newer recommendation calls for four doses at two, four and 18 months and the booster at the time of entering school, at four to six years of age.

TDHR continues to recommend a five-dose series with doses at two, four, six and 18 months, plus the pre-school booster. The doses at six months ensure that approximately 15% more vaccinees are protected against all three virus types during that period prior to the dose schedule for age 18 months, according to TDHR.

The constant threat of polio in border states mandates the extra protection, TDHR advises.

Mrs Philip Overton dies in April in Austin

Mrs Philip (Marietta) Overton died April 21 in Austin.

Mrs Overton was the wife of Philip Overton, former TMA Legal Counsel, and the mother of Philip M. Overton, MD, an Austin physician.

Dr M. H. Crabb retires from state medical board federation

M. H. Crabb, MD, Fort Worth, Secretary of the Federation of State Medical Boards of the US since February 1963 retired from the position May 1.

Dr Crabb has been a leader in medical licensure for 36 years. He was appointed to the Texas Board of Medical Examiners by Governor W. Lee O'Daniel in 1941. He was reappointed to successive terms by five governors of Texas.

From 1948 to 1975 he served as Secretary of the Texas State Board of Medical Examiners. During his years of service, the staff of the Texas Board grew from three employees and a budget of $18,000 per year to 25 employees and a budget of more than $1 million.

Dr Crabb served as President of the Federation of State Medical Boards of the United States Inc from 1955-1956. He was also a member of the Board of Directors of the National Board of Medical Examiners.

Medicare will pay for postage on information requested

A new revision in Medicare forms will allow physicians to be reimbursed for return postage on information requested by the Medicare Program.

Forms are being revised in such a way that all return postage where Medicare asks the physician supplier or beneficiary for additional information will be paid by the Medicare Program, says Bill West, Assistant Vice President for Medicare Relations in Dallas.

The postage will be paid either by furnishing a postage-paid envelope or by placing the mailing permit on the automatic development letter which is used as the return envelope.

Cerebral palsy association is compiling list of medical professionals

United Cerebral Palsy Association of Texas, Inc., is compiling a statewide list of medical professionals who desire to treat individuals having cerebral palsy, mental retardation, epilepsy, autism or multihandicaps.

The list will be used for referral to consumers, parents, and paraprofessionals seeking information from United Cerebral Palsy.

The group is asking for names and addresses of general practitioners and family practitioners who will treat other family members.

The organization also needs names of doctors from other specialty areas including those not commonly associated with the specific population including urology, cardiology, gynecology, and allergic disease.

Those physicians interested should write United Cerebral Palsy, San Jacinto Bldg. No. 201, 9th and San Jacinto, Austin, Texas 78701, attention: Elaine Roberts.

Cardiovascular diseases rank first as causes of disability and death

Cardiovascular diseases resulting from progressive atherosclerosis rank first as causes of disability and death in this country, according to the 1976 annual report of the Council for Tobacco Research—USA, Inc.

These diseases include heart attacks, angina, blockage of arteries in the limbs, and some cases of congestive heart failure, the report said.

The report describes areas being intensively studied in an effort to learn more about the roles that may be played by various factors in the complex development of heart disease. Among these factors are cholesterol and other blood lipids, cigarette smoke and nicotine, cells that compose the inner surfaces of arteries, cells that produce substances involved in blood pressure regulation, and several enzyme systems.

The Council is supporting research on identical twins, the human counterpart of inbred animals used in laboratory studies, in an effort to determine the relative influences of heredity versus environment upon the incidence of heart disease.

The council supports research by independent scientists into smoking and health. For more information about the report write The Council for Tobacco Research—USA, INC, 110 E. 59th Street, New York, NY 10022.

Texas Legislature authorizes manufacture and use of Laetrile

The Texas Legislature and Gov Dolph Briscoe have approved legislation authorizing the manufacture and use of Laetrile in Texas.

As the legislation was being considered, the TMA House of Delegates voted to recommend that Laetrile not be used or prescribed by Texas physicians.

In Dec 1976 the American Medical Association House of Delegates adopted the resolutions that the AMA continue to inform the public of the danger of delay in the diagnosis and treatment of malignancies by methods not generally recognized by the medical profession as beneficial and effective and also that the AMA inform the public that the safety and efficacy of amygdalin for the treatment or palliation of malignancies is unproven and that the use of amygdalin in such cases exploits the victims of malignancies and their families by preying upon the emotions of the hopelessly ill, in some cases for the profit of the unscrupulous.

The Food and Drug Administration has provided an update on Laetrile, derived from pulverized apricot pits and widely promoted for prevention, treatment, and cure of cancer.

Despite the fact that it has been known, tested, and used for more than a quarter of a century, no valid scientific evidence which indicates that Laetrile has any potential value in cancer management has ever been found, reports the *FDA Drug Bulletin.*

Despite confused and misleading reports from Laetrile promoters, FDA has found no study which provides conclusive evidence that Laetrile is active against any cancer, and no reputable organization has found any evidence to support the use of Laetrile in the treatment or prevention of cancer.

The FDA has repeatedly requested the McNaughton Foundation of California, the most recent sponsor of Laetrile, to submit whatever scientific data it might have to correct the serious deficiencies in its animal tests and plans for clinical investigations.

To date, the Government has not received any scientific data which would justify clinical trial under proposed conditions of use as an anticancer drug.

The FDA position on Laetrile remains:

"FDA has considered Laetrile a 'new' drug within the meaning of Section 201 (p) of the Federal Food, Drug, and Cosmetic Act, in that it is not generally recognized among experts qualified by scientific training and experience to evaluate the safety and effectiveness of drugs as safe and effective for use in the cure, mitigation, treatment, or prevention of cancer in man.

"Federal law prohibits the interstate distribution of a 'new drug' unless the FDA has approved a New Drug Application submitted by the sponsor and containing full reports of clinical investigations establishing the safety and effectiveness of such drug.

"While Laetrile has been marketed and pro-

moted as a vitamin, FDA has no basis for accepting the claim that Laetrile is a vitamin and not a drug. It is of no value as a factor in human nutrition."

FDA believes there are serious faults in the "freedom of choice" argument. No worthless drug is without harm; a patient's choice of Laetrile to the extent that such choice delays or interferes with swift diagnosis and prompt effective treatment is potentially fatal, the FDA concludes.

Texas had more than 16,000 non-federal physicians in 1975

There were 16,343 non-federal physicians in Texas in 1975, according to *Physicians Distribution and Medical Licensure in the US, 1975,* published by the American Medical Association.

Of the 16,343 non-federal physicians, 13,405 were involved in patient care. Of those physicians, 2,665 were involved in general practice, 2,411 were involved in medical specialties, 3,498 were involved in surgical specialties, 2,134 were involved in other specialties, and 2,697 were in hospital based practice.

There were also 951 in other professional activity, 819 inactive physicians, and 168 not classified.

The book provides information about 340,280 physicians and the distribution of medical practice in the United States and Possessions by specialties and location. A majority of that group, 91.7% are classified in patient care.

According to the figures, there were 135 physicians per 100,000 population in Texas in 1975. Texas ranks 29th with other states in physicians per 100,000 population. At the time of the survey, there were 12,083,000 Texas residents.

In 1975 there were 21 counties without an active physician in patient care. The largest county without a practicing physician was Hood County with 8,500 residents, and the smallest was Loving County with 200 residents. The counties ranged in population from less than .5 persons per square mile to 21 persons per square mile.

Immunizations of children in US lag, experts say

In spite of convincing evidence that successful immunization can safely and effectively prevent diphtheria, whooping cough, tetanus, polio, mumps, measles and rubella, "it seems incredible that more than 5 million children in the United States are not protected against these diseases," says a communication in the May 16 *Journal of the American Medical Association.*

Saul Krugman, MD, of New York University School of Medicine, and Samuel L. Katz, MD, of Duke University School of Medicine, Durham, NC, point out that "in spite of availability of safe and effective vaccines, there continue to be periodic outbreaks of these preventable diseases."

The outbreaks occur among groups of persons who have never been immunized and among others in whom immunization failures have occurred. Failures of measles vaccine have occurred when the vaccine was rendered impotent from poor refrigeration or excessive exposure to light or heat.

Twenty per cent of children under 13 years are not adequately immunized against diphtheria, tetanus and whooping cough; 30% of those 1 to 4 years are not adequately protected against polio; about 35% of 1-to-4-year-old children have never been immunized against measles and rubella.

Drs Krugman and Katz list the recommended immunization schedules for normal infants and children, beginning at the age of two months with diphtheria, tetanus, whooping cough and polio, and extending at regular intervals through age 16. Tetanus should be repeated every ten years for life.

The successful control of disabling, preventable diseases by the appropriate use of safe and effective vaccines requires the cooperation of physicians, public health authorities, parents, and school health authorities. Physicians and public health officials must provide leadership in this effort in order to prevent future epidemics, they declare.

Texas is seeing results of emergency medical services

Texas is seeing the results in more lives being saved every day because of statewide emergency medical services programs, Raymond T. Moore, MD, Deputy Director of the Texas Department of Health Resources, (TDHR) told delegates at an EMS Symposium in Austin in March.

The Symposium on Issues in Emergency Medical Services was sponsored by the TDHR, Emergency Medical Services Division and cosponsored by the Texas Medical Association and other health organizations.

"When we formed the nucleus of the Emergency Medical Services Division in the mid 1960s, there wasn't much going on in EMS in Texas. Interns had emergency room duty in hospitals, and ambulance service was generally provided as a sideline by the local funeral home. Trauma as a medical specialty was in its infancy. And, the American Trauma Society didn't even exist until 1968," Dr Moore said.

Most of the progress in Texas has been made in the seventies, said Dr Moore. Late in 1970 Texas had 317 trained emergency care attendants (ECA), only nine Emergency Medical Technicians (EMT) and no paramedics.

"The EMS Division started coordinating, certifying and testing a training program for emergency medical attendants. In doing this we received extensive and valuable help from physicians interested in improving emergency medicine.

"Our regional EMS personnel are working with community physicians, and we have 88 schools going on now to train ECAs, EMTs and paramedics. As of the fourth of March, Texas had 5,723 ECAs, 5,175 EMTs and 551 paramedics," he said.

Dr Moore pointed out that the US Department of Health, Education, and Welfare had matched local funds in some areas and that EMS System Grant Funds are being used in five Texas regions. Since 1974, $495,000 in planning funds have come from HEW. And since 1975, he said TDHR has received $974,000 in implementation funds. Nearly $600,000, including $212,107 in local cash, has gone into equipment purchases for the Lower Rio Grande Valley and the West Central Texas programs, he said.

Help is coming from the TDHR in other ways, Dr Moore said. "We provide planning and consultation in the setup of a total communications system. We're at work on a statewide data system. We respond to requests from local communities to help organize or update their own EMS programs.

"We're starting training programs for emergency department nurses," Dr Moore said.

He said educational materials used in one section of the state are being employed elsewhere to inform the public about EMS. Regional systems are being helped to evaluate their progress and are given assistance with grant administration, Dr Moore said.

Hospital administrator gives reasons for rising hospital costs

Why are hospital costs so high?

William J. Watt, assistant administrator/comptroller of St Joseph Hospital Health Center, Syracuse, NY, has introduced his reasons into the March 1, 1977 issue of the *Congressional Record.*

"Why are hospital costs so high? In plain layman language, why are costs so high? You, the public, ask that question every day. Let me try to answer," says Watt.

"You probably have a favorite grocery store at which you do your weekly family grocery shopping. Let us impose some changes to the way that store operates.

"1. The store must record and report each year the number of cans of peas sold, by brand, by customer age, and by employer of the customer.

"2. The store must certify in writing that each customer needs groceries before permitting him/her to enter the store.

"3. The store must have a committee to establish a shopping time limit for each customer

Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

■ **Most Widely Prescribed**—Antivert is the most widely prescribed agent for the management of vertigo* associated with diseases affecting the vestibular system such as Menière's disease, labyrinthitis, and vestibular neuronitis.

■ **Relief of Nausea and Vomiting**—Antivert/25 can relieve the nausea and vomiting often associated with vertigo.*

■ **Dosage for Vertigo*** —The usual adult dosage for Antivert/25 is one tablet t.i.d.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25

(meclizine HCl) 25 mg. Tablets
for vertigo*

DYAZIDE®

Trademark

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE FOR LONG-TERM CONTROL OF HYPERTENSION*

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* WARNING
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes (see Warnings).

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K+ frequently; both can cause K+ retention and elevated serum K+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplasti anemia have been reported with thiazides Triamterene is a weak folic acid antagonist. D periodic blood studies in cirrhotics with splenc megaly. Antihypertensive effect may be enhance in post-sympathectomy patients. Use cautiousl in surgical patients. The following may occu transient elevated BUN or creatinine or both hyperglycemia and glycosuria (diabetic insuli requirements may be altered), hyperuricemia an gout, digitalis intoxication (in hypokalemia), de creasing alkali reserve with possible metaboli acidosis. 'Dyazide' interferes with fluorescen measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness dizziness, headache, dry mouth; anaphylaxis rash, urticaria, photosensitivity, purpura, othe dermatological conditions; nausea and vomiting diarrhea, constipation, other gastrointestinal dis turbances. Necrotizing vasculitis, paresthesias icterus, pancreatitis, xanthopsia and, rarely allergic pneumonitis have occurred with thiazide alone.

Supplied: Bottles of 100 and 1000 capsules Single Unit Packages of 100 (intended for insti tutional use only).

SK&F CO., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

TRIAMTERENE CONSERVES POTASSIUM WHILE

Doctor, do you think your malpractice insurance premiums are too high?

Very likely you *are* paying more than you need to. Most insurance companies base their rates on nationwide experience — which includes parts of the nation with traditionally high losses. And, with the ordinary company, profits from underwriting, investments and reserves for unreported or unpaid claims are paid as dividends to their stockholders, not in savings to you!

BUT, NOT IF YOU INSURE WITH API!

API is a multiple-line Texas insurance company owned and controlled by the physicians it insures. ALL earnings — underwriting profits, investment income, unpaid reserves — are returned to members in reduced premiums and other benefits.

And that's not all. You'll have the advantage of a peer review group to screen out claim-prone applicants and provide claim review with defendant doctor and attorney. You'll get legal representation by a nationally recognized law firm with a history of successful, tough defense of malpractice suits.

You'll be protected by API's non-assessable, innovative policy designed to save you money. While it gives you the security of an occurrence-type policy form, you aren't charged for that expensive provision so long as you remain a subscriber. If, for any reason, the policy is terminated, then occurrence coverage is guaranteed indefinitely by the payment of only two moderate premiums — which are based on *actual* experience rather than estimates of future losses.

API has grown to over three quarters of a million dollars in policyholders surplus — net worth. (Some companies advertise their total assets, which of course are meaningless until reduced by liabilities to arrive at net worth).

Doctor, find out how to join your colleagues who have learned the way out of the professional liability dilemma. Call or write today!

AMERICAN PHYSICIANS INSURANCE EXCHANGE

1400 FRITO-LAY TOWER • DALLAS, TEXAS 75235 • PHONE: (214) 350-6661

API is reinsured by one of America's largest reinsurance groups — rated A+AAAAA by A.M. Best.

chewable!
chewable!
chewable!
chewable!
chewable!

announcing

ISORDIL® CHEWABLE TABLETS 10 mg
(ISOSORBIDE DINITRATE)

for those angina* patients for whom you prefer a chewable isosorbide dinitrate. This higher strength chewable tablet makes increased dosage practical, and the tablet is scored for a lower starting dose and titration of dosage.

*Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:
"Probably" effective: When taken by the chewable route, Isordil Chewable Tablets are indicated for the treatment of acute anginal attacks and for prophylaxis in situations likely to provoke such attacks.
Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.

Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.

Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

Consult direction circular before prescribing.

May we send you reprints, detailed information and/or professional samples?

IVES LABORATORIES INC. Ives®
685 Third Avenue
New York, New York 10017
DEDICATED TO IMPROVING THE QUALITY OF LIFE THROUGH MEDICINE®

as he/she walks in the door.

"4. The store must keep a record, by name, of time customer entered store, items purchased, amount paid by item, name of stock boy who placed each item on the shelf, time of customer departure from store, and name of store employee who carried the groceries out.

"5. The store must obtain approval of the authorities before adding or deleting any produce or specific brand of product.

"Let us now mandate that the store give away fifty thousand dollars worth of groceries each year. In fact, let us force the Store Manager to post signs in three languages, telling customers that he is required to do this; and again, records must be maintained by customer on free groceries given away under this plan, as well as records on those denied.

"Next let's require that for one half of its customers the store cannot set prices. Instead, our authority will determine how much the customer may be charged.

"It sounds ridiculous to apply such criteria to a grocery store . . . But believe it or not, hospitals are mandated by several authorities to report countless statistical data and are bound to many, many rules—not unlike those we have dreamed up for our grocery stores," Watt says.

"The requirements sound ridiculous when applied to a grocery store. And you can easily imagine the increased cost of groceries if the criteria were so mandated. Now do you know why hospital costs are so high?" Watt asks.

Sen Andujar becomes governor for a day

Sen Betty Andujar, Fort Worth, was sworn in May 7 as the first woman Republican governor for a day.

Sen Andujar, a member of the Texas Medical Association Auxiliary, predicted a GOP woman would officially hold the office "in the forseeable future."

As governor, Sen Andujar signed a series of proclamations, one honoring her husband, John J. Andujar, MD, a Fort Worth physician.

More than 1,000 persons crowded into the Senate Chamber in Austin to watch Sen Andujar sworn into the ceremonial post by Chief Justice Joe Greenhill of the Texas Supreme Court.

Sen Andujar is president pro tem of the Senate and becomes governor when Gov Dolph Briscoe and Lt Gov Bill Hobby are out of the state.

She was honored by an afternoon luncheon attended by state Republican leaders including US Sen John Tower.

Mrs. Horace H. Trippet, immediate past president of the TMA Auxiliary, (right) presents a proclamation to Sen Betty Andujar.

American health care is improving, foundation says

American medical and health care are getting better, says a communication from the Robert Wood Johnson Foundation in the April 18 issue of the *Journal of the American Medical Association*.

David E. Rogers, MD, and Robert J. Blendon, ScD, of the Foundation in Princeton, NJ, cite studies to show considerable progress in medical and health care in the past 15 years.

"We have improved that availability of physician services and largely eliminated the gap between visits made by rich and poor, or white and black citizens," Dr Rogers and Dr Blendon say.

"We have greatly expanded the number of health professionals who provide medical care.

"Better organized programs to provide care to groups with special health problems have reduced both mortality and morbidity (death and illness).

"Age-adjusted death rates, infant and maternal mortality, and death rates from coronary artery disease have fallen."

The article points out that during the early 1960s and continuing through the 1970s, this nation markedly increased its national commitment to improving medical care for all of its citizens.

"In our pluralistic, sometimes groping American way, many groups, institutions, and individuals have participated in strengthening medical care services in this country. Indeed, in some sectors, remarkable improvements have taken place," they say.

Between 1969 and 1975, physician visits per person per year rose by 19%, and "This suggests that physicians were more accessible." Low income people particularly are seeing doctors more often, they say. Black Americans are now seeing physicians as frequently as white. They point out that the physician visit does not necessarily mean better health, but "great efforts have been made to improve access to care, change has occurred, and the change seems to be in the proper direction."

Between 1970 and 1976, medical schools increased the number of physicians in training by 50%. In contrast to the 40,000 Americans in medical schools in 1970, almost 60,000 were in training in 1976. Nursing schools have increased their enrollment by 52%. The number of dentists is almost 25% higher than in 1970.

The article points to various programs that have brought about improvement in the outcome of pregnancy, reduced illness in children, better organized care of chronic disease.

Between 1968 and 1975, overall death rates dropped by almost 14%. From 1960 to 1975, infant deaths dropped 38%, from 26 to 16 infants deaths per 1,000 live births, the lowest ever recorded during the same 15-year period.

Deaths ascribed to coronary heart disease have fallen 23% during the 12-year period from 1963 to 1975. In fact, ten of the first 15 causes of US deaths have declined.

Still unsolved is the problem of escalating health care costs, Dr Rogers and Dr Blendon say, and "costs may prove to be the Achilles' heel of this country's arrangements for health services." Access to health care for rural citizens remains a difficult problem. Better financing of ambulatory care is still needed.

"As this country looks forward to its next 100 years, it is our hope that we discard the feeling that our social institutions are unable to cope with national problems. In the health sector, significant progress has been made, and possibilities for yet more improvement exist for the future," they concluded.

Dr John Affeldt named new JCAH director

John E. Affeldt, MD, has been named director of the Joint Commission on Accreditation of Hospitals (JCAH).

Dr Affeldt succeeds John D. Porterfield, MD, director of the JCAH since 1965, who is retiring in August.

Dr Affeldt, an internist, has been medical director of the Los Angeles County Dept of Health Services since 1972.

Member organizations of the JCAH board are the American Medical Association, the American College of Physicians, the American College of Surgeons, and the American Hospital Association.

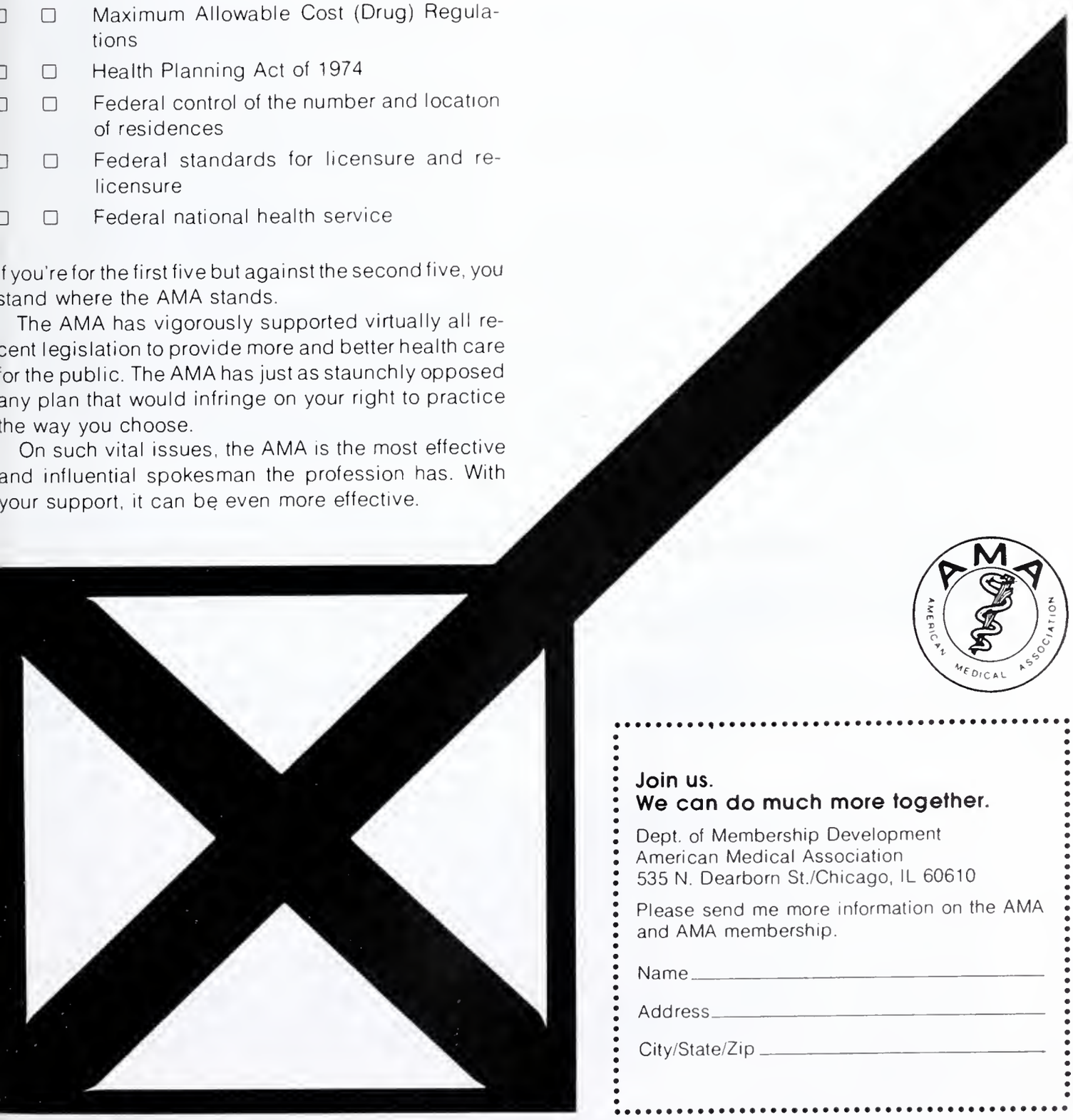
Where do you stand on these issues?

Pro	Con	
☐	☐	Maternal and child care programs
☐	☐	Federal aid to medical students
☐	☐	Extending private health insurance to everyone
☐	☐	Nationwide program of community emergency medical services
☐	☐	Reform of the tort system of malpractice adjudication
☐	☐	Maximum Allowable Cost (Drug) Regulations
☐	☐	Health Planning Act of 1974
☐	☐	Federal control of the number and location of residences
☐	☐	Federal standards for licensure and relicensure
☐	☐	Federal national health service

If you're for the first five but against the second five, you stand where the AMA stands.

The AMA has vigorously supported virtually all recent legislation to provide more and better health care for the public. The AMA has just as staunchly opposed any plan that would infringe on your right to practice the way you choose.

On such vital issues, the AMA is the most effective and influential spokesman the profession has. With your support, it can be even more effective.



Join us.
We can do much more together.

Dept. of Membership Development
American Medical Association
535 N. Dearborn St./Chicago, IL 60610

Please send me more information on the AMA and AMA membership.

Name _____

Address _____

City/State/Zip _____

Ad Hoc organization committee will meet July 8-9

The TMA Ad Hoc Committee to Study the Association's Organizational Structure and Functions will meet July 8-9 at the Austin Hilton Inn.

The seven-member committee will consider TMA relationships with related medical groups including the Texas Medical Foundation, the Texas Institute for Medical Assessment, and specialty societies.

The committee, created by the TMA Executive Board in January 1977, was charged with the responsibility to study the Association's organization, submit recommendations for defining Association relationships with other organizations, and to develop a mechanism for continuing long range planning.

Committee members include Joseph T. Painter, MD, chairman, Charles Max Cole, MD, Sheridan S. Evans, MD, Ben R. Keller, Jr, MD, Sam N. Key, Jr, MD, A. Rex Kirkley, MD, and Travis Smith, MD.

Also attending the meetings and contributing to the committee's discussion have been L. S. Thompson, Jr, TMA past president, John M. Smith, Jr, TMA president, and C. Lincoln Williston, TMA executive director.

The committee will also meet July 30-31 to examine TMA resources including fiscal, membership, and auxiliary, and August 20-21 to draft the report to be presented to the TMA Executive Board in September and to the TMA House of Delegates in November.

Coming next month

Scientific articles scheduled for publication in July include near-drowning in children; fever of unknown origin; uncommon insect bites; an analysis of the physician supply in Texas; and luetic labyrinthitis.

Investment performance for TMA Members' Retirement Plan and Trust

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1977 Through 4/30	3 Years Ended 12/31/76	5 Years Ended 12/31/76	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	− 7.4%	− 9.3%	− 8.3%	1.8%
Loomis-Sayles Mutual Fund	− 8.2%	− 1.6%	− 4.4%	3.8%
Mercantile Bank Equity Fund	− 8.0%	+ 5.9%	−17.8%	4.0%
Mercantile Bank Fixed Income Fund	− 1.7%	+ 0.2%	− 5.5%	7.5%
T Rowe Price Growth Stock Fund	−14.7%	− 2.6%	−16.6%	2.3%
T Rowe Price New Income Fund	− 2.9%	+ 2.7%	N/A	7.9%
Stein Roe & Farnham Balanced Fund	− 8.6%	− 0.5%	− 2.7%	3.4%
Standard & Poor 500 Stock Average	− 8.4%	+10.4%	+ 5.3%	—
Dow Jones Industrial Average	− 7.7%	+18.1%	+12.9%	—

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

WASHINGTON: LIMITING HOSPITAL REVENUE. The US Congress has received its first major health bill from the Carter Administration—a massive and complicated program for limiting hospital revenues to a 9 or 10% rise annually. Income from all inpatients, private as well as federal beneficiaries, would be affected. Hospitals exceeding the allowable increase could be charged a penalty tax amounting to 150% of the overcharges. Such offenders also would have to reduce charges the following year. Physicians offices were not affected by the proposed legislation, though Health, Education and Welfare Secretary Joseph Califano has indicated this is under study. Inpatient revenues of the 6,000 acute-care hospitals in this country are covered. Brand new hospitals, federal hospitals, and hospitals controlled by Health Maintenance Organizations would be exempt.

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber, Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

WASHINGTON: NATION'S HEALTH. The nation's health shows steady improvement, according to a 25-year mortality survey by the National Center of Health Statistics. Since 1950, the death rate from stroke and heart disease declined steadily in those aged 25 to 74 and deaths from tuberculosis, once a leading cause, now number 3,000 annually. After leveling off in the 1960s the death rate has steadily declined in the 1970s and reached an all-time low in 1975 of 8.9 deaths per 1,000 population. Infant mortality declined from 29.2 to 16.1 deaths per 1,000 live births, but the United States still ranks 15th in infant mortality.

WASHINGTON: CHILD HEALTH SCREENING PROGRAM. President Carter has sent an expanded child health screening program to Congress. The Child Health Assessment Program (CHAP) will replace Medicaid Early and Periodic Screening, Diagnosis and Treatment Program (EPSDT) for children. The CHAP legislation calls for new spending of $180 million. Under the proposed bill, the average federal payment to the states for health care provided to children would rise from the current 55% to 75%. Benefits would be extended to children under age six whose family income level makes them eligible for assistance but who do not meet additional state eligibility requirements.

INDIANA: LAETRILE. The Indiana General Assembly has given overwhelming approval to a bill that would legalize the use and manufacture of both Laetrile and saccharin. The bill prohibits the Indiana State Board of Health and the State Board of Pharmacy from interfering in the use, sale, or manufacture of either substance, except to prevent adulteration or misbranding.

WASHINGTON: HOSPITAL BED CUTS. Several billion dollars a year could be saved without hurting anyone's health by closing unneeded hospitals, according to a report to the Health, Education, and Welfare Department. Hospital capacity could be reduced by at least 20% by retiring idle beds and cutting out overuse,

said the report, prepared by Walter McClure, PhD, of InterStudy, a Minnesota research organization. The report suggested the best way to solve the empty bed problem is to close entire facilities.

WASHINGTON: NATIONAL HEALTH INSURANCE. HEW's new advisory Committee on National Health Insurance will schedule public hearings in several cities beginning early this summer. HEW Secretary Joseph Califano said the 29-member committee will "conduct a far-reaching inquiry, including hearings across the nation, into the problems of financing health care services and give advice on the major issues that will be addressed in the NHI plan that President Carter has asked us to prepare." Terming NHI a cornerstone of Carter's domestic policy, Califano said the Administration's proposal will be a uniquely American plan which both recognizes the strengths of the present health care system and deals with its shortcomings.

WASHINGTON: SECOND OPINION ON SURGERY. A second opinion on surgery "is just that and nothing more—an opinion which is, by definition, subjective," the AMA told the House Commerce Subcommittee on Oversight and Investigations. Testifying for the AMA, Executive Vice President James H. Sammons, MD, said second opinions may be embraced by insurance companies and the government "as an arbitrary device to ration medical care," but "they are not of themselves a scientifically sound or medically valid method of determining the medical necessity of any procedure." Dr Sammons outlined for the Subcommittee the activities which the AMA and state medical societies have taken to bring about the highest possible level of care for patients and the steps which organized medicine has taken to identify, correct, and, if necessary, discipline physicians who are rendering inappropriate or inadequate medical care. They included support for the establishment of effective mechanisms for medical discipline and peer review.

Thiazides and hypertension:

A balancing act: Blood pressure reduction vs potassium depletion

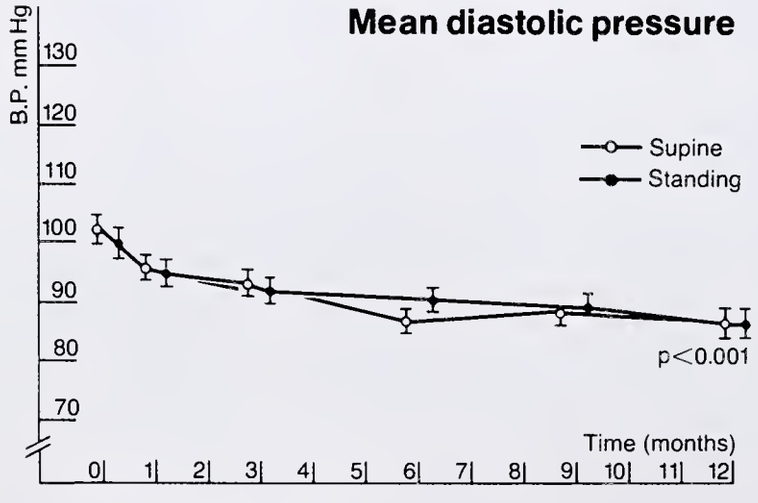
From a 1-year study of 18 patients with mild uncomplicated hypertension published in The Lancet*

Once a day

Naturetin®

Bendro-flumethiazide Tablets N.F.

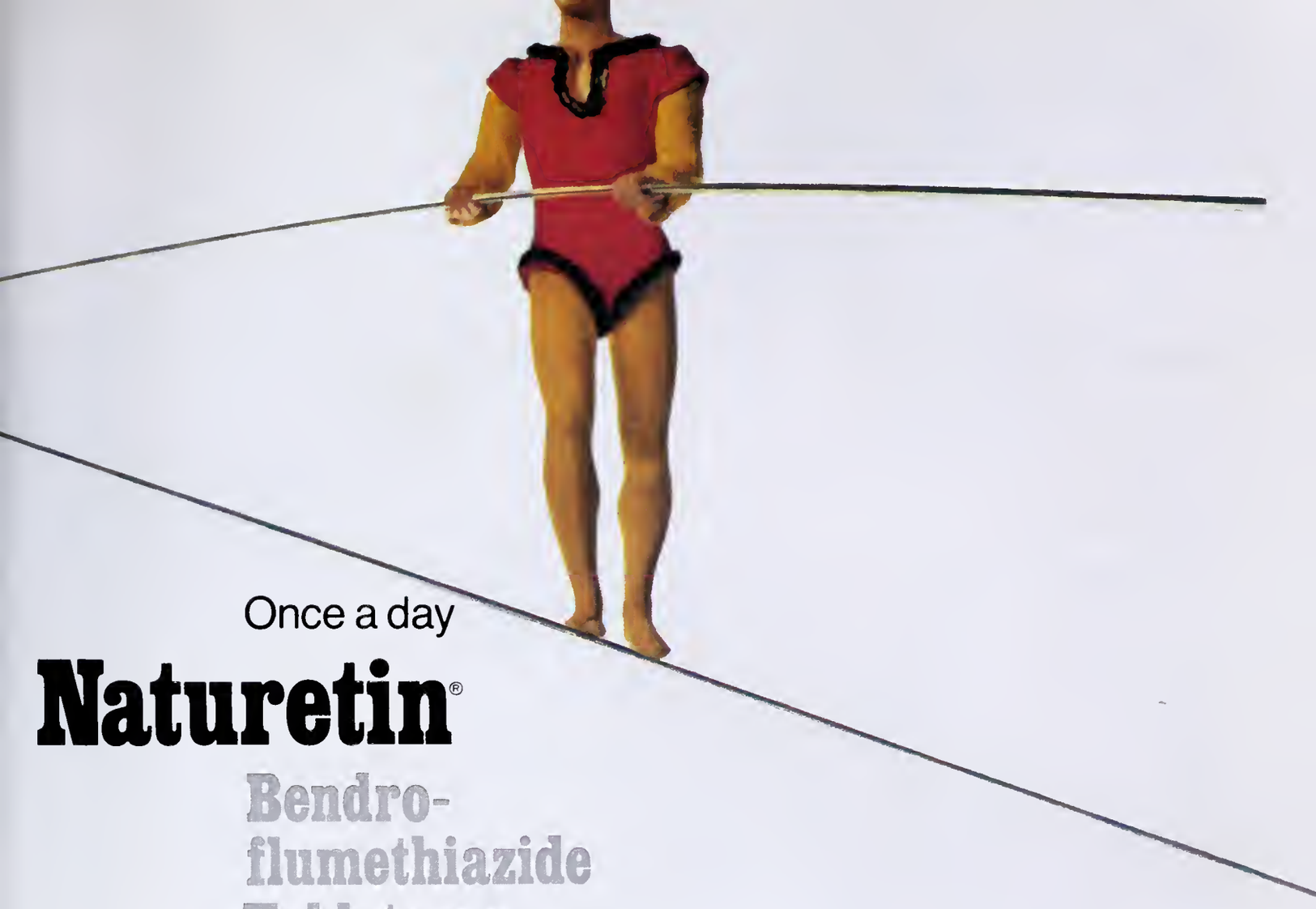
Diastolic blood pressure down 12-15%



"The mean pretreatment blood pressure was 170/103 mm Hg (supine) and 166/100 mm Hg (standing). Diastolic pressure continued to fall over the first 6 months and then there was no further change up to 1 year...The mean blood pressure at 12 months was 153/88 mm Hg (supine) and 142/88 mm Hg (standing)."

"The patients were receiving a single daily dose of 10 mg bendrofluazide [bendroflumethiazide]...there were no apparent side effects from the medication."

*Wilkinson PR et al: The Lancet 1:759-762, 1975.



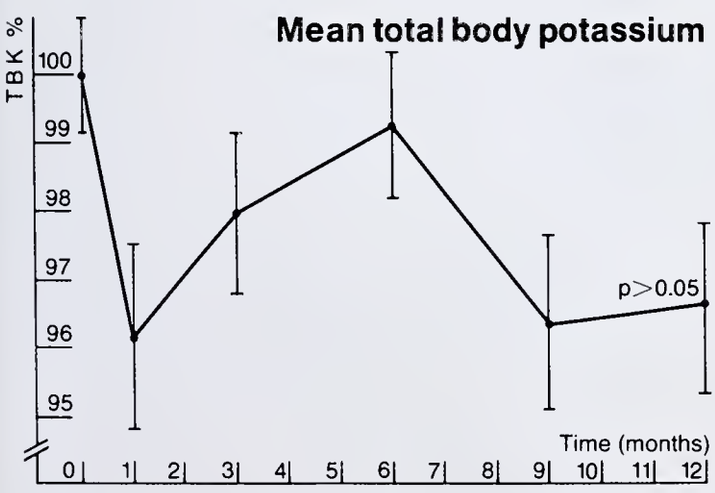
Once a day

Naturetin®

Bendro-flumethiazide Tablets N.F.

2.5, 5 and 10 mg

Potassium stabilized at 96% mean TBK



"The amount of potassium loss during the period of study did not seem to be clinically significant."

"A serum potassium of less than 3.5 mmol per litre is often taken as the value below which potassium supplements should be given...At an arbitrary lower value for serum potassium of 3.0 mmol per litre, few patients, our data suggest, would need potassium supplements. Our findings with TBK support this view..."

See next page for full prescribing information.

Once a day Naturetin® Bendroflumethiazide Tablets N.F.

NATURETIN®-2.5
NATURETIN®-5
NATURETIN®-10
Bendroflumethiazide Tablets N.F.

DESCRIPTION

Naturetin (Bendroflumethiazide Tablets N.F.) is a benzothiadiazine derivative containing a benzyl and a trifluoromethyl group. It is a potent oral diuretic and antihypertensive agent available as compressed tablets providing 2.5, 5.0, or 10 mg. bendroflumethiazide.

ACTIONS

The mechanism of action results in an interference with the renal tubular mechanism of electrolyte reabsorption. At maximal therapeutic dosage all thiazides are approximately equal in their diuretic potency. The mechanism whereby thiazides function in the control of hypertension is unknown.

INDICATIONS

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated as adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis and corticosteroid and estrogen therapy.

Bendroflumethiazide has also been found useful in edema due to various forms of renal dysfunction such as: nephrotic syndrome, acute glomerulonephritis, and chronic renal failure.

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated in the management of hypertension either as the sole therapeutic agent or to enhance the effectiveness of other antihypertensive drugs in the more severe forms of hypertension.

Usage in Pregnancy. The routine use of diuretics in an otherwise healthy woman is inappropriate and exposes mother and fetus to unnecessary hazard. Diuretics do not prevent development of toxemia of pregnancy, and there is no satisfactory evidence that they are useful in the treatment of developed toxemia.

Edema during pregnancy may arise from pathological causes or from the physiologic and mechanical consequences of pregnancy. Thiazides are indicated in pregnancy when edema is due to pathologic causes, just as they are in the absence of pregnancy (see WARNINGS). Dependent edema in pregnancy, resulting from restriction of venous return by the expanded uterus, is properly treated through elevation of the lower extremities and use of support hose; use of diuretics to lower intravascular volume in this case is illogical and unnecessary. There is hypervolemia during normal pregnancy which is harmful to neither the fetus nor the mother (in the absence of cardiovascular disease), but which is associated with edema, including generalized edema, in the majority of pregnant women. If this edema produces discomfort, increased recumbency will often provide relief. In rare instances, this edema may cause extreme discomfort which is not relieved by rest. In these cases, a short course of diuretics may provide relief and may be appropriate.

CONTRAINDICATIONS

Bendroflumethiazide is contraindicated in anuria.

It is also contraindicated in patients who have previously demonstrated hypersensitivity to it or other sulfonamide-derived drugs.

WARNINGS

Bendroflumethiazide should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may be additive or may potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

Usage in Pregnancy. Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers. Thiazides appear in breast milk. If use of the drug is deemed essential, the patient should stop nursing.

PRECAUTIONS

Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: dryness of the mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Latent diabetes mellitus may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use. If emergency surgery is indicated, preanesthetic and anesthetic agents should be administered in reduced dosage.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS

Gastrointestinal System: anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), and pancreatitis. *Central Nervous System:* dizziness, vertigo, paresthesia, headache, and xanthopsia. *Hematologic:* leukopenia, agranulocytosis, thrombocytopenia, and aplastic anemia. *Dermatologic-Hypersensitivity:* purpura, photosensitivity, rash, urticaria, and necrotizing angiitis (vasculitis, cutaneous vasculitis). *Cardiovascular:* orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates or narcotics. *Other:* hyperglycemia, glycosuria, occasional metabolic acidosis in diabetic patients, hyperuricemia, allergic glomerulonephritis, muscle spasm, weakness, and restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION

Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

Diuretic: The usual dose is 5 mg. once daily, preferably given in the morning. To initiate therapy, doses up to 20 mg. may be given once daily or divided into two doses. A single daily dose of 2.5 to 5 mg. should suffice for maintenance.

Alternatively, intermittent therapy may be advantageous in many patients. By administering the preparation every other day or on a three to five day per week schedule, electrolyte imbalance is less likely to occur; however, the possibility still exists.

In general, the lowest dosage that achieves the therapeutic response should be employed.

Antihypertensive: The suggested initial dosage is 5 to 20 mg. daily. Maintenance dosage may range from 2.5 to 15 mg. per day, depending on the individual response of the patient. When the diuretic is used with other antihypertensive agents, lower maintenance doses for each drug are usually sufficient.

STORAGE

Store at room temperature; avoid excessive heat.

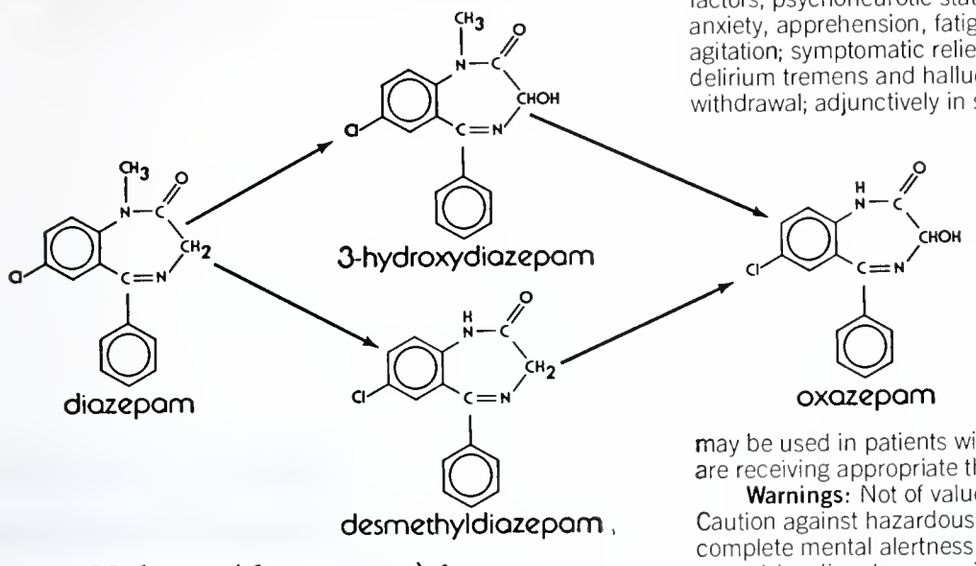
HOW SUPPLIED

2.5 mg. tablets in bottles of 100, 5 mg. tablets (scored) in bottles of 100 and 1000, and 10 mg. tablets (scored) in bottles of 100.

SQUIBB®

©1977 E.R. Squibb & Sons, Inc. 477-501

A pharmacokinetic character all its own



Valium (diazepam) is a benzodiazepine with a distinctive pharmacokinetic profile

The pharmacokinetic profile of Valium is one of the characteristics that sets it apart from other benzodiazepines. Consider, in particular, the metabolic pathway of Valium. The three major metabolites of Valium exhibit significant pharmacologic activity—and so, of course, does the parent substance—diazepam itself. All combine to produce the characteristic clinical response seen with Valium. The response you have come to know, to want and to trust.

Pharmacokinetic studies also demonstrate that Valium has a pattern of absorption, distribution, metabolism and elimination that is reliable and consistent. And, although the pharmacokinetics of a drug cannot, at present, be specifically related to its clinical effects, it is clearly a factor that distinguishes one product from another by providing important insights into how each moves through the patient's body.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

MEETINGS

AMERICAN GROUP PRACTICE ASSOCIATION

The American Group Practice Association and the American Academy of Medical Directors will present the South Central Regional Institute June 9-11, 1977, at the Padre Island Beach Hotel in Corpus Christi, Tex. The program is titled Your Group's Future: Strategies for Goal Setting. Among the topics the faculty will discuss are National Health Planning and Resources Development Act of 1974 (PL 93-641), federal health services distribution strategy, federal health financing strategy, public-private interface: options and alternatives, the legislative process: group practice participation, and manpower issue: physician extenders. The program meets the criteria for 10½ credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association. Registration fees are $110 for American Group Practice Association and American Academy of Medical Directors members, and $140 for nonmembers.

Contact: AGPA Regional Institute, 20 S Quaker Lane, Alexandria, Va 22314

NUECES COUNTY MEDICAL SOCIETY

The Nueces County Medical Society has announced that the Third Annual Workshop on Current Concepts in Respiratory Care will take place June 2-3, 1977 at the Master Hosts Inn, 3200 Surfside, Corpus Christi, Tex. The program is sponsored by the Coastal Bend Health Science Consortium and Texas Society of Respiratory Therapists. Acid-base balance and electrolyte inbalance; x-ray evaluation of the chest; cardiopulmonary monitoring-CVP, EKG, Swans Ganz catheter; monitoring of the adult patient on mechanical ventilation, ventilatory case studies, and other topics related to respiratory care will be discussed. The pre-registration fee is $15; late registrants will be charged $20. The workshop is limited to 300 participants.

Contact: John Paul Schulze, MD, Pres, Nueces County Medical Society, Box 5280, Corpus Christi, Tex 78405

CURRENT NATIONAL MEETINGS

CORNELL UNIVERSITY, Health Executives Development Program, Ithaca, NY, June 12-24, 1977. Intensive two-week seminar designed for hospital administrators, health planners, clinical and medical directors, executives from voluntary and government health agencies. Seminars represent two major thrusts: trends, issues in national health policy; advances in principles of management, techniques for decision making. Limited to 45 participants. Acceptances based on professional positions, demonstrated leadership of applicants. $1,200 program fee covers tuition, meals, room, program materials. Contact: Health Executives Development Program, Cornell University, Malott Hall, Ithaca, NY 14853.

INTERNATIONAL CONGRESS OF RHEUMATOLOGY, San Francisco, June 26-July 1, 1977. Symposia topics: balance of therapeutic choices in rheumatoid arthritis, concepts of joint replacement in rheumatoid arthritis, immune complexes as pathogenetic effectors, others. Five-six workshops daily. Registration fee for members, $150, includes entrance to all sessions, exhibits, participation in Sunday opening reception, special evening at de Young Museum, program, abstracts, directory of advance registrants. Contact: 9650 Rockville Pike, Bethesda, Md 20014.

NATIONAL FOUNDATION/MARCH OF DIMES, 1977 Birth Defects Conference, Hyatt Regency Hotel, Memphis, Tenn, June 8-10, 1977. Areas for discussion: susceptibility to infection as a birth defect: role of genetic polymorphisms, immune defense system, contribution of study of twins to clinical delineation of birth defects, chromosomal abnormalities, selected abnormalities of sex differentiation, recent advances. Presented in cooperation with University of Tennessee Center for the Health Sciences. Contact: Robert L Summitt, MD, Professor of Pediatrics, Anatomy and Child Development, University of Tennessee Center for the Health Sciences, 711 Jefferson, Memphis, Tenn 38163.

For other courses and symposia, see Continuing Education Courses, pp 35-37.

Calendar of Listings

■ Denotes Texas Meetings

JUNE

AMERICAN MEDICAL ASSOCIATION, Annual Convention, San Francisco, Jun 18-23, 1977. James H Sammons, MD, Exec Vice-pres, 535 N Dearborn St, Chicago 60610.

INTERNATIONAL CONGRESS OF RHEUMATOLOGY, San Francisco, Jun 26-Jul 1, 1977. 9650 Rockville Pike, Bethesda, Md 20014.

NATIONAL FOUNDATION/MARCH OF DIMES, 1977 Birth Defects Conference, Memphis, Jun 8-10, 1977. Robert L Summitt, MD, Professor of Pediatrics, Anatomy and Child Development, University of Tennessee Center for the Health Sciences, 711 Jefferson, Memphis 38163.

■ NUECES COUNTY MEDICAL SOCIETY, Corpus Christi, Tex, Jun 2-3, 1977. John Paul Schulze, MD, Pres, Box 5280, Corpus Christi, Tex 78405.

ROCKY MOUNTAIN NEUROSURGICAL SOCIETY, INC, Lake Tahoe, Nev, Jun 8-12, 1977. Richard H Moiel, MD, Sec, 601 Medical Towers, 1709 Dryden St, Houston 77030.

■ TEXAS HEART INSTITUTE, Houston, Jun 2-4, 1977. Mrs Verna Dewees, Sec to Medical Director, Box 20269, Houston 77025.

JULY

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Mescalero, NM, Jul 18-21, 1977. Bob Reid, Convention Dir, Box 456, Sunland Park, NM 88063.

FLORIDA CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, 1977 Clinical Conference on Pre-Hospital Emergency Care, Orlando, Fla, Jul 8-10, 1977. Registrar, 600 Courtland St, Suite 420, Orlando, Fla 32804.

■ TEXAS RESEARCH INSTITUTE OF MENTAL SCIENCES, Sixth Annual Southwestern Partial Hospitalization Conference, Houston, Jul 29-30, 1977. c/o Kevin Roberts, PhD, Texas Research Institute of Mental Sciences, 1300 Moursund, Texas Medical Center, Houston 77030.

AUGUST

AMERICAN MEDICAL ASSOCIATION, Fifth Western Hemisphere Nutrition Congress, Quebec City, Canada, Aug 15-18, 1977. Department of Foods and Nutrition, AMA, 535 N Dearborn St, Chicago 60610.

ASPEN MUSHROOM CONFERENCE, Aspen, Colo, Aug 7-12, 1977. Aspen Mushroom Conference, c/o Beth Israel Hospital, 1601 Lowell Blvd, Denver 80204.

INTERNATIONAL CONFERENCE ON MEDICAL COMPUTING, Toronto, Aug 8-13, 1977. Department of Computer Systems in Medicine, American Medical Association, 535 N Dearborn St, Chicago 60611.

SEPTEMBER

AMERICAN ASSOCIATION OF ELECTROMYOGRAPHY AND ELECTRODIAGNOSIS, Salt Lake City, Sep 30-Oct 1, 1977. JL Melvin, MD, Sec-Treas, 10437 W Watertown Plank Rd, Box 7372, Milwaukee 53226.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Hot Springs, Va, Sep 8-10, 1977. GW Mitchell, Jr, MD, Sec, 171 Harrison Ave, Boston 02111.

AMERICAN ASSOCIATION FOR THE SURGERY OF TRAUMA, Detroit, Sep 15-17, 1977. JA Boswick, Jr, MD, Admn Officer, University of Colorado, 4200 E Ninth Ave, Denver 80220.

AMERICAN CANCER SOCIETY, NATIONAL CANCER INSTITUTE, National Conference on the Lymphomas and the Leukemias, New York, Sep 29-Oct 1, 1977. Sidney L Arje, MD, 777 Third Ave, New York 10017.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Hartford, Conn, Sep 10-11, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Lake of the Ozarks, Mo, Sep 16-18, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Chicago, Sep 24-25, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Hot Springs, Va, Sep 30-Oct 2, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Seminar on Negotiations, Bloomington, Minn, Sep 10-12, 1977. Department of Negotiations, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, Sep 27-Oct 1, 1977. Ms L Sablack, Exec Sec, 5272 River Rd, Suite 290, Bethesda, Md 20014.

AMERICAN ROENTGEN RAY SOCIETY, Boston, Sep 27-30, 1977. JF Martin, MD, Sec, 300 S Hawthorne Rd, Winston-Salem, NC 27103.

■ AMERICAN SOCIETY OF OPHTHALMOLOGIC AND OTOLARYNGOLOGIC ALLERGY, Dallas, Sep 30-Oct 1, 1977. WA Ward, MD, Sec-Treas, Bowman Gray School of Medicine, Winston-Salem, NC 27103.

■ TEXAS MEDICAL ASSOCIATION, Fall Conference, Austin, Tex, Sep 9-11, 1977. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.

OCTOBER

AMERICAN COLLEGE OF CHEST PHYSICIANS, Las Vegas, Nev, Oct 30-Nov 3, 1977. 911 Busse Highway, Park Ridge, Ill 60068.

SOCIETY FOR CLINICAL AND EXPERIMENTAL HYPNOSIS, INC, Los Angeles, Oct 11-16, 1977. Mrs Marion Kenn, Admn Dir, 129A Kings Park Dr, Liverpool, NY 13088.

AMERICAN ACADEMY FOR CEREBRAL PALSY AND DEVELOPMENTAL MEDICINE, Atlanta, Oct 5-9, 1977. JE Bryan, Exec Sec, 1255 New Hampshire Ave, Washington, DC 20036.

■ AMERICAN ACADEMY OF CHILD PSYCHIATRY, Houston, Oct 19-21, 1977. VQ Bausch, Exec Dir, 1800 R St NW, Washington, DC 20009.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Las Vegas, Nev, Oct 10-13, 1977. R Tusken, Exec Dir, 1740 W 92nd St, Kansas City, Mo 64114.

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, Bal Harbour, Miami, Fla, Oct 30-Nov 4, 1977. CC Herold, Exec Dir, 30 N Michigan Ave, Suite 922, Chicago 60602.

AMERICAN ACADEMY OF PSYCHIATRY AND THE LAW, New Orleans, Oct 20-23, 1977. WD Weitzel, MD, Department of Psychiatry, College of Medicine, University of Kentucky, Lexington, Ky 40506.

AMERICAN ASSOCIATION OF PUBLIC HEALTH PHYSICIANS, Washington, DC, Oct 30-Nov 1, 1977. JV Sessums, Jr, MD, Sec-Treas, 1703 Ridgemont, Austin, Tex 78723.

AMERICAN ASSOCIATION FOR THE STUDY OF LIVER DISEASES, Chicago, Oct 31, 1977. MA Rothschild, MD, Sec-Treas, VA Hospital, First Ave at E 24th St, New York 10010.

AMERICAN CLINICAL AND CLIMATOLOGICAL ASSOCIATION, Colorado Springs, Colo, Oct 23-26, 1977. JE Wood, MD, Sec-Treas, Pennsylvania Hospital, Philadelphia 19107.

AMERICAN COLLEGE OF GASTROENTEROLOGY, New Orleans, Oct 23-29, 1977. D Weiss, Exec Dir, 299 Broadway, New York 10007.

AMERICAN COLLEGE OF PREVENTIVE MEDICINE, Atlanta, Oct 30-31, 1977. W Bentley, Exec Dir, 801 Old Lancaster Rd, Bryn Mawr, Pa 19010.

■ AMERICAN COLLEGE OF SURGEONS, Dallas, Oct 17-21, 1977. CR Hanlon, Dir, 55 E Erie St, Chicago 60611.

■ AMERICAN GROUP PRACTICE ASSOCIATION, Houston, Oct 5-8, 1977. WG Davis, MD, Exec Vice-pres, 20 S Quaker Lane, Box 949, Alexandria, Va 22313.

■ AMERICAN INSTITUTE OF ULTRASOUND IN MEDICINE, Dallas, Oct 29-Nov 4, 1977. D LaMaster, Mng Editor, Box 25606, Oklahoma City 73125.

AMA REGIONAL MEETING, Huron, Ohio, Oct 7-9, 1977. AMA, Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMA REGIONAL MEETING, Honolulu, Oct 30-Nov 3 1977. AMA, Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMA SEMINAR ON NEGOTIATIONS, Atlanta, Oct 15-17, 1977. AMA, Department of Negotiations, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, October 1977. L Sablack, Exec Sec, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN PHYSIOLOGICAL SOCIETY, St Louis, Oct 22-27, 1977. OE Reynolds, PhD, Exec Sec-Treas, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SCHOOL HEALTH ASSOCIATION, Atlanta, Oct 13-16, 1977. SJ Jerrick, Exec Dir, Box 708, ASHA National Office Bldg, Kent, Ohio 44240.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, New Orleans, Oct 15-19, 1977. JW Andes, Exec Sec, 515 Busse Highway, Park Ridge, Ill 60068.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, Atlanta, Oct 17-23, 1977. WF Hoffman, Jr, Exec Dir, 2400 E Devon Ave, Suite 218, Des Plaines, Ill 60018.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Las Vegas, Nev, Oct 20-28, 1977. DL Gilcrest, Exec Dir, 2100 W Harrison St, Chicago 60612.

AMERICAN SOCIETY OF MAXILLOFACIAL SURGEONS, San Francisco, Oct 30-Nov 4, 1977. CA Janda, MD, DDS, Sec, 120 Oakbrook Center Mall, Westchester, Ill 60153.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS, Memphis, Oct 12-15, 1977. FK Woolley, Exec Dir, 2625 Butterfield Rd, Oak Brook, Ill 60521.

CENTRAL ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Biloxi, Miss, Oct 6-8, 1977. DG Anderson, MD, Sec-Treas, Women's Hospital, University of Michigan Medical Center, Ann Arbor, Mich 48109.

■ MEDICAL GROUP MANAGEMENT ASSOCIATION, Houston, Oct 9-14, 1977. RV Grant, PhD, Exec Dir, 4101 E Lousiana Ave, Denver 80222.

NOVEMBER

AMERICAN ACADEMY OF PEDIATRICS, New York, Nov 5-10, 1977. Robert G Frazier, MD, Exec Officer, 1801 Hinman Ave, Evanston, Ill 60201.

AMERICAN ASSOCIATION OF BLOOD BANKS, Atlanta, Nov 11-16, 1977. Lois J James, Asstnt Exec Dir, 1828 L St, NW, Washington, DC 20036.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, New Orleans, Nov 9-13, 1977. Howard Silber, Exec Officer, Box 912, Omaha 68101.

AMERICAN CANCER SOCIETY, INC, New York, Nov 9-11, 1977. Lane W Adams, Exec Vice-pres, 777 Third Ave, New York 10017.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, San Francisco, Nov 8-10, 1977. Arthur Auer, Exec Officer, 3900 Capital City Blvd, Lansing, Mich 48906.

AMERICAN MEDICAL ASSOCIATION, 16th Natl Conference on Physicians and Schools, Chicago, Nov 10-11, 1977. Division of Scientific Activities/Department of Health Education, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL WOMEN'S ASSOCIATION, Denver, Nov 30-Dec 4, 1977. Lorraine Loesel, Exec Officer, 1740 Broadway, New York 10019.

■ SOUTHERN MEDICAL ASSOCIATION, Section on Ophthalmology, Dallas, Nov 6-9, 1977. William H Coles, MD, Section Sec, Dept of Ophthalmology, 80 Barre St, Charleston, SC 29401.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, El Paso, Tex, Nov 5-9, 1977. Don Jackson, Exec Dir, 1901 N Lamar, Austin, Tex 78705.

CONTINUING EDUCATION COURSES

JUNE

Basic Sciences: Microbiology & Immunology

Postponed: Clinical Immunodiagnosis, UT Health Science Center at San Antonio, originally scheduled for June 16-19, 1977

Cardiovascular Disease

Title: Texas Heart Institute Eighth Annual Symposium
Sponsor: Texas Heart Institute
Location of Course: Texas Children's Hospital, Houston
Dates: June 2-4, 1977
Duration: 4 hours Thursday; 8 hours Friday; 4 hours Saturday; 16 total course hours
Fee: $100
Designed For: General practitioners; Specialists
Enrollment: Maximum, 275
Credit: AAFP Elective
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel, seminar, television
Contact: Robert J. Hall, MD, Medical Director, Texas Heart Institute, Box 20269, Houston 77025

Title: Cardiology
Sponsors: American College of Cardiology; Baylor College of Medicine, Houston
Location of Course: Sheraton-Marina Inn, Corpus Christi
Dates: June 20-23, 1977
Duration: Continuous; 21 total course hours
Designed For: General practitioners; Specialists
Enrollment: Minimum, 50; Maximum, 250
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, workshops
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Gastroenterology

Title: Nutrition Course
Sponsors: Baylor College of Medicine, Houston; American College of Nutrition
Location of Course: Shamrock Hilton Hotel, Houston
Dates: June 9-10, 1977
Duration: Continuous; 2 days
Fee: To be announced
Designed For: General practitioners; Specialists in Internal Medicine, Pediatrics, Family Medicine
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Health Services

Title: Medical Practice and the Role of Health Education
Sponsor: UT Health Science Center at Houston
Date: June 24, 1977
Duration: 8 am-5 pm; 6-7 total course hours
Fee: To be announced
Designed For: General practitioners
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Internal Medicine

Title: Review of Internal Medicine
Sponsors: Baylor College of Medicine, Houston; American College of Physicians
Location of Course: Jesse H. Jones Library Building, Houston
Dates: June 2-4, 1977
Duration: Continuous; 6-7 hours per day beginning at 8 am; 18-20 total course hours
Fee: American College of Physicians members, residents, fellows, $100; Nonmembers, $150; Associates, $50
Designed For: General practitioners; Specialists
Enrollment: Minimum, 50; Maximum, 250
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Otolaryngology

Title: Head and Neck Reconstructive and Rehabilitation after Ablative Surgery
Sponsor: UT Medical Branch, Galveston
Location of Course: Holiday Inn, Galveston
Dates: June 3-4, 1977
Duration: 8 am-5 pm; 16 total course hours
Fee: $80
Designed For: General practitioners; Specialists
Enrollment: Minimum, 25; Maximum, 110
Teaching Methods: Audiovisual materials, clinical conference, lecture, open question, panel, seminar, television
Contact: NeKee McNulty, Assistant Director, Continuing Education Division, UT Medical Branch, Galveston 77550

Radiology and Radioisotopes

Title: Ultransonic Workshop
Sponsor: UT Health Science Center at Houston
Dates: June 9-10, 1977
Duration: 8 am-5 pm; 2 days; 12 total course hours
Fee: To be announced
Designed For: Specialists in Radiology
Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Psychiatry

Title: Second Annual International Field Studies on Psychiatry and Culture
Sponsors: Department of Psychiatry, UT Southwestern Medical School; A. Webb Roberts Center for Continuing Education, Dallas
Location of Course: Great Britain
Dates: June 11-26, 1977
Fee: $100 (travel expense paid separately)
Credit: 38 hours, AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Lecture, field trips
Contact: Associate Dean for Continuing Education, UT Southwestern Medical School, 5323 Harry Hines Blvd, Dallas 75235

Other

Title: Practice vs Malpractice: A Symposium on Legal Medicine and Human Values
Sponsor: Temple Veterans Administration Center
Location of Course: Ponderosa Motor Inn, Temple
Date: June 25, 1977
Duration: 9:30 am-4 pm
Contact: Marie Saunders, Coordinator, Allied Health and Education (141C), Veterans Administration Center, Temple 76501

JULY

Basic Sciences: Microbiology & Immunology

Title: Workshop in Immunodiagnosis
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: July 21-24, 1977
Duration: Continuous; 7½ hours instruction per day; 30 total course hours
Fee: $150
Designed For: Specialists
Enrollment: Minimum, 20; Maximum, 50
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, laboratory work, lecture, open question
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Physiology

Title: Interpretation of the ECG in Health Screening
Sponsor: Baylor College of Medicine, Houston
Location of Course: Baylor College of Medicine, Houston
Dates: July-August 1977
Duration: Continuous; 5-6:30 pm, 12 days; 18 total course hours
Fee: To be announced
Designed For: General practitioners; Specialists
Enrollment: Minimum, 10
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, enrollee performs procedure, lecture, open question, television
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Psychiatry

Title: Advanced Tutorial in Rorschach
Sponsors: UT Health Science Center at San Antonio
Dates: July 16-17, 1977
Duration: Continuous; 6 hours Saturday; 5 hours Sunday; 11 total course hours
Fee: $90
Designed For: Specialists in Psychology
Enrollment: Maximum, 20
Teaching Methods: Audiovisual materials, open question, seminar, television
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Radiology & Radioisotopes

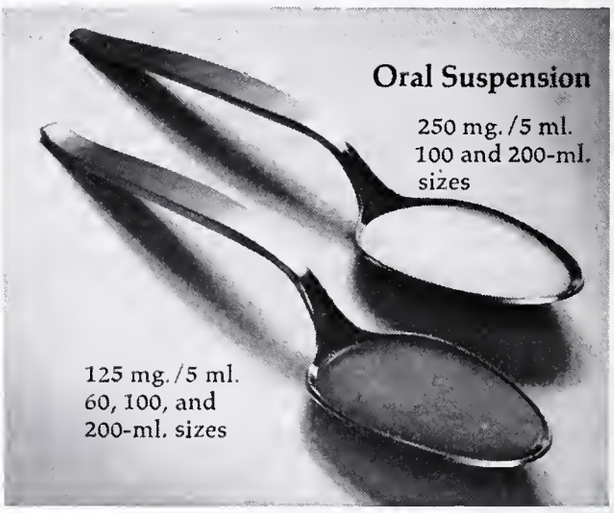
Title: External Beam, Interstitial, and Intracavitary Dosimetry—Principles
Sponsors: UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute
Location of Course: UT Health Science Center at Houston
Dates: July 5-15, 1977
Duration: Continuous; 8 hours instruction per day; 10 days; 80 total course hours
Fee: $350
Designed For: Specialists in Radiotherapy; Physicists
Teaching Methods: Enrollee performs procedure, laboratory work, lecture
Contact: Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: External Beam, Interstitial, and Intracavitary Dosimetry—Manual and Computer Methods of Calculation
Sponsors: UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute
Location of Course: UT Health Science Center at Houston
Dates: July 18-29, 1977
Duration: Continuous; 8 hours instruction per day; 10 days; 80 total course hours
Fee: $350
Designed For: Specialists in Radiotherapy, Dosimetry; Physicists
Teaching Methods: Enrollee performs procedure, laboratory work, lecture
Contact: Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Urology

Title: Urology Oncology Seminar
Sponsors: Division of Continuing Education, UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute
Location: Auditorium, M.D. Anderson Hospital and Tumor Institute Texas Medical Center, Houston
Dates: July 28-29, 1977
Contact: Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

easy to take



Keflex®
cephalexin

Lilly

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

500738

What has happened to coronary artery bypass?

Don W. Chapman, MD; William L. Winters, Jr., MD; George C. Morris, MD; Gerald M. Lawrie, MD

Initially, the object of coronary artery bypass was basically to decrease angina. Its effect on the incidence of myocardial infarction and longevity are just beginning to emerge. Our studies suggest that graft closure is most prone to occur in the first six months postoperatively and is caused by intimal thrombosis. The indications and contraindications for possible coronary artery bypass surgery are presented. In five-to-seven year followup studies, graft patency in our series was 87.4%. The symptomatic relief following coronary artery bypass is quite striking. In some randomized series with patients treated medically and surgically, the incidence of recurrent myocardial infarctions seems to be decreased. Longevity studies are not yet definitive.

Coronary artery bypass has been a somewhat controversial issue for the past decade and is slowly emerging as one more modality in the treatment of coronary artery disease.

The chief clinical contraindications include an associated malignancy, (except chronic lymphocytic leukemia), advanced renal or cerebral disease, recent myocardial infarction, congestive heart failure, or unavailability of a surgeon trained in coronary artery bypass surgery. As defined in the cardiac catheterization laboratory, diffuse coronary artery disease involving the distal portions of the vessels or severe dysfunction of the left ventricle would also seem to contraindicate surgery.

The aim of surgery is to decrease angina, to decrease the incidence of myocardial infarction, and to increase longevity. The ideal surgical candidate would be one with proximal high-grade stenosis of the coronary arteries, good run-off distal vessels, and a reasonably well functioning left ventricle.

Indications for Bypass

The potential indications for catheterization studies prior to possible coronary artery bypass are represented in Fig 1.

Disabling angina is defined as intractable angina unresponsive to all medical therapy. This group may have a positive treadmill response early in the test.

Mild, stable angina frequently is handled well with medical therapy. Reeves[1] has noted that single-vessel involvement has an annual attrition rate of 2%, double-vessel involvement 7%, and triple-vessel involvement 11% per year. Particularly in young individuals with mild to moderate angina or previously demonstrated myocardial infarction, selective cine coronary arteriography and left ventricular angiography may be indicated.

In the individual with crescendo angina, episodes of angina lasting more than 30 minutes may develop. A sudden onset of chest pain, nocturnal angina, or angina more easily precipitated with exercise may

1. Coronary artery bypass surgery.

Potential Indications:

1. Patient with stable angina undergoing sudden increase in angina
2. Disabling angina
3. Crescendo (pre-infarction) angina
4. Subendocardial infarction; investigate within 5-6 weeks
5. Asymptomatic male, 40-50 years of age with positive treadmill ECG (controversial)
6. Ventricular aneurysms, especially with associated symptoms of angina, congestive heart failure, arrhythmias, or embolic phenomena
7. Ventricular septal defect secondary to myocardial infarction
8. Mitral regurgitation secondary to severe papillary muscle dysfunction with congestive heart failure
9. Atypical chest pain
10. Suspected severe left main coronary artery stenosis as indicated by an excessive positive treadmill ECG
11. Patient undergoing investigation for either mitral or aortic valvular replacement may have associated coronary artery stenosis

develop also. This type of individual frequently has ischemic ST-T wave electrocardiographic (ECG) abnormalities and only minor cardiac enzyme changes. In this group, within six months in a normal progress of the disease, myocardial infarction occurs in 33%, and there is a mortality rate of about 15%.[2] On entering the hospital, patients are frequently allowed 24-48 hours for their condition to stabilize, and catheterization studies are undertaken. Then, in favorable situations, surgery may be indicated and the mortality will be about 3-4% in the first year.

Subendocardial infarction[3] sometimes causes only minor ST segment changes and minor cardiac enzyme abnormalities without evidence of a transmural infarction. Individuals with subendocardial infarction have a significant yearly myocardial infarction rate. There is a frequent persistence of angina as well as frequent recurrence of rhythm disturbances. The post-hospital phase seems to be considerably more malignant than it is in patients with the transmural infarction. It should be investigated within five to six weeks from its onset.

Asymptomatic men 40-50 years old who have a positive treadmill ECG[4] especially within the first four to five minutes of the test, should be examined thoroughly. It is likely that they already have multiple vessel involvement.

In some individuals with angina, surgically correctable lesions in connection with congestive heart failure are seen and may well need investigation.[5] Patients with ventricular aneurysms are prone to develop congestive heart failure, repetitive rhythm disturbances, or, occasionally, embolic disorders. In the absence of an aneurysm, the left anterior descending coronary artery is often totally attenuated and ends in scar tissue, and bypass is not possible. In some cases, the right coronary artery or the left circumflex coronary artery may benefit from coronary artery bypass along with the resection of the ventricular aneurysm. Good results occur in about 80% with an operative risk of about 5%. Ventricular septal defects most commonly involve the muscle septum and may be encountered in 1-2% of patients dying of acute myocardial infarction.[6] They are most prone to occur in the first 2 to 14 days after infarction. If the patient's condition is stabilized for four to six weeks, surgery may be done with an acceptable surgical risk. In some cases, the symptoms and signs are so life-threatening that early attempts are made to put in velour surgical patches during the acute phase of myocardial infarction, but, the mortality rate is high. Again, coronary artery bypass may be accomplished at the same time when indicated by results of catheterization studies.

Mitral regurgitation may result from dysfunction or rupture of the papillary muscle with secondary congestive heart failure. The surgical risk is up to 50% in the acute phase. The risk is much lower, perhaps 10%, in the chronic phase, when the valve is replaced. Mitral regurgitation may also result from inferior wall aneurysms. Resection of these aneurysms usually requires replacement of the mitral valve also. The best results are in patients in whom valvular insufficiency is the main cause of the symptoms. Along with the valve replacement, simultaneous revascularization has significantly improved results.

In the patient with so-called atypical chest pain, the stress test may show abnormalities at times, and there may be other indications of significant coronary artery involvement. These patients may occasionally be considered for bypass surgery, and the usual criteria for selection are applied.

Cardiogenic shock may develop in the acute phase of myocardial infarction. It may be heralded by a diminished urine output below 30 cc per hour, systolic arterial pressure below 80 mm Hg, pulmonary capillary wedge pressure greater than 18

mm Hg, and cardiac output below 2.0 liters per square meter of body surface.[7] The Massachusetts General Hospital workers[7] divided patients with cardiogenic shock into two groups, those with onset in less than six hours, and those with onset after six hours. They pointed out that in the acute onset type, there was massive infarction involving more than 40% of the myocardial mass. They further noted that in 16 of 18 patients, there was a complete occlusion of the left anterior descending coronary artery. They routinely employed the intra-aortic balloon in treatment. In patients who became stable after 24-48 hours, selective cine coronary arteriography and left ventricular angiography were performed. Bypass surgery was performed when the patients were deemed suitable candidates. This is a high-risk surgical group, but the overall salvage rate was about 20%.

Individuals with left main coronary artery involvement frequently give a history of intensification of their angina. A significant number of these patients will have an excessively positive treadmill response in short periods of time.

When arteriograms reveal a lesion in the left main artery, a minimal number of injections are done. We believe that this is a lethal lesion, and bypass to the left anterior descending and left circumflex arteries and also to the right coronary artery if it is significantly involved, should be done on the same day. At times, it is necessary to take the patients directly from the laboratory into surgery. If the left ventricular hemodynamics deteriorate, or if the patient has persistent ST changes of severe ischemia, or if the patient is showing evidence of myocardial infarction or develops refractory ventricular arrhythmias or goes into cardiac shock, or if the patient has evidence of high-grade stenosis of the left main coronary artery with occlusion of the right coronary artery, immediate surgery may be indicated.

There are some patients who are undergoing investigation for either mitral or aortic valvular replacement whose selective cine coronary arteriograms may reveal the presence of highly stenosed coronary arteries. Frequently, coronary artery bypass is indicated simultaneously with the valvular replacement. Mortality is higher in those with mitral valve replacement.

A small but significant group of patients who have severe angina with some degree of congestive heart failure may benefit from bypass surgery. The bypass may totally relieve the angina and, in some, may stabilize the failure status.[5] We believe that angina suggests that there are still viable myocardial fibers present, and bypass surgery has been of definite benefit in some of these cases. There is improvement in about 80%, with about 15% mortality.[5]

Graft Patency

One of the unsettled questions has been the long-term pathological fate of the venous grafts used for coronary artery bypass. Lawrie and associates,[8] working in conjunction with ourselves, examined some 89 grafts in 41 patients. There were 27 patients from whom the graft biopsy specimens were taken on the average of 14 days postoperatively. The grafts were occluded in five, and all of these were the result of recent thrombi formation. In the late group, studied for an average of 34 months, there were four obstructed grafts, three as a result of partially organized thrombi and only one as a result of severe subintimal elastic thickening. In another group biopsied, the arteriographic studies done in ten revealed that all grafts were patent and of excellent sized lumina. It has been found that these venous grafts reveal smooth, uniform lumina in diameters consistently greater than 1.5 times that of the recipient artery. Significant segmental stenoses were not observed in that group. It has been found that the

saphenous veins in the legs are close to the ideal size for grafting. Even though the graft will narrow slightly, it will maintain a satisfactory size lumen. Thus, most graft occlusions occur in the first six months and are usually caused by thrombosis. Late graft occlusions are rare but may occasionally be the result of subintimal proliferation.

When studied angiographically, Lawrie[8] found good results when there was a bidirectional flow from the graft to the proximal and distal native artery. This condition existed in 59% of 417 vein grafts in 243 patients studied. In 21% there was bidirectional flow from the graft, and the native artery closed off proximally but good flow was maintained distally. In 5%, the retrograde proximal flow from the graft in the native vessel was closed but it flowed distally. This was thought to be due perhaps to a technical difficulty in the way the graft was inserted. In 12.5%, the bypass graft closed but the native vessel was unchanged. This may have resulted from entrapment of the graft by fibrous tissue in the mediastinum. Finally, in 2.5% there was graft occlusion associated with occlusion of the native artery, and in part this may result from poor surgical technique. Attention to meticulous surgical technique along with improved patient and vessel selection may improve this.

Follow-up Studies

Results of randomized studies are just now beginning to appear. The studies from the Houston Veterans Administration Hospital, as reported by Mathur and Guinn,[9,10] embrace 116 patients who were followed for an average of 52 months. They were divided equally, and 15% were asymptomatic in the medically treated group, as compared with 59% in the surgically treated group. Another 54% improved with medical treatment as compared with 16% with surgical treatment. There were 11 deaths in the medically treated group as contrasted to 5 in the surgically treated group. There were 10 nonfatal infarctions in the medically treated and 7 in the surgically treated groups. After surgery, the treadmill tolerance was improved 87% as contrasted with a 42% increase after medical therapy.

Sheldon and others[11] at the Cleveland Clinic found that in 1,000 postoperative patients, there was a surgical mortality of 3.4%, and about 2.4% more deaths in the first year. After that, the annual attrition rate was 2.5%. In 489 medically treated cases of similar severity, followed at the Cleveland Clinic, the yearly attrition was 7.8%. Hall and associates[12] found an overall 86% graft patency rate in five years.

The long-term patency in 456 consecutive patients operated on by Morris and associates[13, 14] between 1968 and 1971 was 87.4%, with the patency of at least one or more grafts 95%, and of the left anterior descending artery grafts, 92%.

The overall initial group included some patients with congestive heart failure, resected ventricular aneurysms, mitral valve replacement, and ventricular septal repair, with the combined mortality (30-day) of 6.8%. Angina was totally absent in 35% and improved in another 60%. The patients working fulltime constituted 75% of the group, and only 5% were inactive. The annual attrition rate was 2.8%, which included the 30-day hospital mortality. But, in the subsequent 3,374 consecutive cases, the 30-day mortality has decreased to 3.5% with a projected further decrease in the annual attrition rate to 1.8%.

It would appear that coronary artery bypass surgery, alone or in conjunction with certain other surgical procedures, is slowly assuming a more defined role in the treatment of coronary artery disease. However, one cannot overlook the risk factors[15] that need to be controlled, such as the dietary and drug management of

lipid abnormalities, the control of hypertension, the total discontinuance of tobacco, and the development of a good exercise program to include walking, swimming, and occasionally jogging if the treadmill ECG test result is satisfactory. In evaluation and treatment of the individuals with type A personality, the avoidance of confrontations and stress and the opportunity to drain off excessive drives in other channels would be of benefit. Perhaps more important than all the risk factors would be the early implementation of diet, exercise, etcetera, in the pediatric group to prevent the possible onset of coronary artery disease.

Summary

The indications and contraindications for possible coronary artery bypass surgery have been presented. Along with this, the evaluation of microscopic graft changes and graft patency are considered. Occlusive graft changes were predominantly the result of intimal thrombi. In only one of the grafts was severe intimal fibroelastic thickening the cause of the occlusion. Definite symptomatic relief of angina in the five-year follow-up appears to be accomplished by coronary artery bypass. Angina was totally absent in 35% and significantly improved in another 50% of cases. The overall patency rate of coronary artery bypass from five to seven years is 87.4%; the left anterior descending coronary artery patency is 92% in 450 consecutive cases. The average annual attrition rate (five years) was 2.8%, (394 out of 456 patients), and includes a 30-day hospital mortality of 6.8% (31 out of 456 patients). In the subsequent 3,374 consecutive cases, the 30-day hospital mortality rate is 3.5%, and the annual attrition rate shows a progressively downward trend to 81%. The remaining unanswered questions as to the effectiveness of coronary artery bypass surgery on myocardial infarction and increasing longevity are yet to be determined. Consideration of the risk factors and the need to approach this problem from the pediatric age group are emphasized.

References

1. Reeves TJ, Oberman A, Jones WB, et al: Natural history of angina pectoris. Am J Cardiol 33:423-430, 1974.

2. Mundth ED, Buckley MJ, Leinbach RC, et al: Surgical intervention for the complications of acute myocardial ischemia. Ann Surg 379-390, 1973.

3. Loop FD, Cheanvechai C, Sheldon WC, et al: Early myocardial revascularization during acute myocardial infarction. Chest 66-6:478-482, 1974.

4. Bruce RA, Lerman J: Exercise testing and training in relation to myocardial infarction. Post Graduate Medicine 57-5:59-65, 1975.

5. Lawrie GM, Morris GC Jr, Chapman DW: Surgical treatment of some complications of coronary artery disease. Texas State Med J 71-10:53-60, 1975.

6. Buckley MJ, Mundth ED, Daggett WM, et al: Surgical management of ventricular septal defects and mitral regurgitation complicating acute myocardial infarction. Ann Thor Surg 16-6:598-609, 1973.

7. Mundth ED, Buckley MJ, Leinbach RC, et al: Myocardial revascularization for the treatment of cardiogenic shock complicating acute myocardial infarction. Surg 70:78-87, 1971.

8. Lawrie GM, Lie JT, Morris GC Jr, et al: Vein graft patency and intimal proliferation in aortocoronary bypass; early and long term angiopathologic correlations. Am J Cardiol 38:856, 1976.

9. Mathur VS, Guinn GA, Anastassiodes LC, et al: Surgical treatment for stable angina pectoris. N Engl J Med 292:709-713, 1975.

10. Guinn GA, Mathur VS: Surgical versus medical treatment for stable angina pectoris. A prospective randomized study with one to four year follow-up. Accepted for publication in Gen Thoracic Surg.

11. Sheldon WC, Rincon G, Effler DB, et al: Vein graft surgery for coronary artery disease. Survival and angiographic results in 1000 patients. Circulation 48(Suppl 3):184-189, 1973.

12. Hall RJ, Dawson JT, Cooley DA, et al: Coronary artery bypass. Circulation 48(Suppl 3):146, 1973.

13. Morris GC Jr, Reul GJ, Howell JF, et al: Follow-up results of distal coronary artery bypass for ischemic heart disease. Amer J of Card 29:180-185, 1972.

14. Lawrie GM, Morris GC Jr, Chapman DW, et al: Patterns of patency of 596 vein grafts up to seven years after coronary artery bypass. J Thorac Cardiovasc Surg 73: 443, 1977.

15. Turner R, Ball K: The cardiologist's responsibility for preventing coronary heart disease. Am Heart J 91:139-147, 1976.

The authors, Department of Medicine, Baylor University College of Medicine, The Methodist Hospital, Houston, TX 77030.

Reprint requests to 6436 Fannin, Suite 700, Houston, TX 77030.

Supported in part by a grant from the Medical Center Cardiovascular Research Foundation.

A long-term clinical assessment of patients with 'in-hospital crescendo angina' treated by emergency vein grafting

Ninety-five patients underwent direct myocardial revascularization for treatment of "in-hospital crescendo angina." Medical surveys were conducted and surviving patients followed for 30 to 67 months. There were 82 long-term survivors, 61 of whom (74.4%) are free from angina, fully productive, and require no type of medicinal management. An additional 18 (22%) considered themselves to be considerably improved and to have an active existence although they do take some antianginal medications with good control.

We conclude that a fully productive and gainful life expectancy can be enjoyed following surgical revascularization under these conditions, and that the late attrition caused by cardiac disease has been considerably reduced.

Despite the symptomatic improvement afforded patients by myocardial revascularization[1-13] when performed for either acutely progressive or chronic stable angina, questions relating to the long-term functional status and myocardial viability of the patients remain. In an effort to gain just that sort of information, we have surveyed a selected group of patients treated for "in-hospital crescendo angina," defined as refractory angina in a hospitalized patient receiving optimal medical management.

Material and Methods

Ninety-five consecutive patients fitting the previous definition underwent direct myocardial revascularization. Five patients had four-vessel coronary disease, 55 had triple coronary artery disease, 25 had double artery involvement, and 10 had single artery disease. Four-vessel coronary disease implies involvement of the three major systems plus at least one additional angiographically significant branch of a major vessel, such as a large proximal diagonal branch of the left anterior descending coronary artery, or a large posterior ventricular branch of the circumflex system. Twenty-eight of these people had experienced prior myocardial infarction. Ventricular function was good to fair in 7 patients, fair in 23 patients, and fair to poor in 65 patients. Surgical procedures performed on this group of patients included 2 quintuple, 12 quadruple, 35 triple, 32 double, and 14 single reversed saphenous vein aortocoronary bypass procedures. There were two associated ventricular aneurysmectomies, six associated endarterectomies, and three associated internal mammary bypasses.

1. Angiographic findings and results.

	No. Vessels Involved			
	Four	Three	Two	One
Patients	5	55	25	10
Hospital mortality	1	3	2	0
Late mortality	0	5	2	0

Results

There were 13 (13.6%) perioperative myocardial infarctions, six (6.3%) of which resulted in hospital death. Three of these infarctions resulting in operative death had occurred before surgical intervention as determined by postmortem examination. The other three hospital deaths consisted of two patients with lesions of the left main artery and one patient with a trapped first septal perforator. Figs 1 and 2 summarize mortality with respect to vessel involvement and surgical procedures performed. Survivors were followed for 30 to 67 months.

C. J. Lambert, MD
Robert S. Firpo, MD
Aaron Estrera, MD
Maurice Adam, MD
J. Peter Thiele, MD
Gerald F. Geisler, MD
Ben F. Mitchel, MD

Data were gathered from periodic office visits and from specific communications from referring physicians. Of seven survivors with perioperative infarctions, five are alive and symptom free, two have angina and are being medically managed, and none have congestive heart failure. There were seven late deaths occurring 4 to 35 months postoperatively. Three of these deaths resulted from myocardial infarction, one from hepatitis, one from pulmonary embolus, one from cerebrovascular accident, and one from suicide. The late deaths are summarized in Fig 3. Of 82 survivors surveyed before the preparation of this study, 61 (74.4%) are angina free, are not taking beta-blocker or coronary vasodilator medications, and are fully productive at a level of activity consistent with that prior to the onset of the condition. Eighteen (22%) additional survivors consider themselves to be subjectively better and are active, but are taking antianginal medications with good control. One patient is considered to be psychologically disturbed; repeat coronary arteriography has demonstrated patency of all three of his grafts, but functionally he is a cardiac cripple. Two patients are lost to follow-up.

Comments

Several authors have attested to the high early mortality and guarded long-term prognosis in patients who develop pre-infarction angina. Gazes[13] had drawn a distinction between patients with pre-infarction angina responsive to medical management and a high-risk subgroup who continued to have angina despite in-hospital attempts at control. His study showed an overall 12-month survival in 140 patients of 85%. Of 54 of these patients classified as belonging to the high-risk subgroup, 35% suffered a myocardial infarction within three months of the onset of symptoms. The one-year survival rate of this subgroup was 57%. Krauss[15] reported an 85% one-year survival rate in 100 patients with pre-infarction angina. Seventy-three of the group survived at 20 months. The overall survival of our surgically treated group at an average of 32 months is 86%.

Three of our operative deaths occurred as a result of operating upon a recently infarcted ventricle. We feel that greater diagnostic acumen and new methods of diagnosis such as the myocardial scan may differentiate evolving infarctions from impending infarctions and thus avert exposing patients with acute infarctions to the increased risk of early surgical intervention.

In the three other operative deaths we

2. Surgical procedures and results.

Operation	Quintuple	Quadruple	Triple	Double	Single
Patients	2	12	35	32	14
Aneurysmectomy		1	1		
Endarterectomy		1	3	2	
Internal mammary			1*	1†	1
Hospital mortality	0	1	2	3	0
Late mortality	0	1	4	2	0

*Associated early mortality
†Associated late mortality

3. Late deaths.

Age	Disease Treated	Operation	Cause of Death	Autopsy	Months Survived
61	Double coronary	Double	Hepatitis	Yes	12
66	Triple coronary	Triple	CVA	No	12
53	Triple coronary	Triple	Myocardial infarction*	Yes	36
39	Double coronary	Single	Pulmonary embolus	Yes	24
36	Triple coronary	Quadruple	Suicide	Yes	24
63	Triple coronary	Triple	Myocardial infarction	No	4
59	Triple coronary	Triple	Myocardial infarction	No	27

*All three grafts closed.

were dealing with left main artery lesions and high lesions of the left anterior descending artery with a trapped first septal perforator. In our experience, these lesions carry a greater risk of perioperative infarction and surgical mortality. We currently have been evaluating the use of preoperative and postoperative intra-aortic balloon counterpulsation in these patients. We have also been using the balloon to stabilize patients with preinfarction syndrome prior to coronary cinearteriography and subsequent surgery. Our results, as do those of others,[16] seem encouraging but are inconclusive thus far.

Summary

Ninety-five patients treated by emergency vein grafting for "in-hospital crescendo angina" were surveyed. No patient had been followed for less than 2½ years. There were six operative deaths (6.32%) and seven late deaths (8%). Three of the operative deaths were patients who actually had had an undiagnosed acute myocardial infarction, two patients had left main artery obstruction, and one patient had a trapped first septal perforator. Only three of the late deaths were directly related to cardiac disease; one, a myocardial infarction; one, "intractable coronary artery insufficiency"; and one, ventricular fibrillation.

Sixty-one patients are alive, angina free, and fully productive. An additional 18 patients are decidedly improved and although functional, they have some angina requiring medical treatment.

One patient is psychologically unbalanced despite normal results of studies. Three patients were lost to follow-up although one of these was known to be in China and asymptomatic after 2½ years.

We conclude that (1) "in-hospital crescendo angina" cannot always be differentiated from acute myocardial infarction; (2) a fully productive and a gainful life expectancy can be enjoyed after surgical revascularization with a follow-up period averaging 32 months; and (3) that the late attrition due to cardiac disorders has been reduced.

References

1. Manley JC, Johnson WD: Effects of surgery on angina (pre and post-infarction) and myocardial function (failure). Circulation 46:1208-1221, 1972.

2. Hill JD, Kerth WJ, Kelly JJ, et al: Emergency aortocoronary bypass for impending or extending myocardial infarction (abstr). Circulation 43:suppl 1:105+, 1971.

3. Hill JD, Kerth WJ, DeLeval MR, et al: Myocardial infarction and preinfarction: Results of emergency myocardial revascularization. J Cardiovas Surg (Torino) 15:205-208, 1974.

4. Vogel JH, McFadden RB, Love JW, et al: Emergency vein bypass for the preinfarction syndrome. Chest 59:606-609, 1971.

5. Spencer FC, Glassman E: Preinfarction angina: Current therapeutic considerations. Am J Cardiol 32:382-384, 1973.

6. Bonchek LI, Rahimtoola SH, Anderson RP, et al: Late results following emergency saphenous vein bypass grafting for unstable angina. Circulation 50:972-977, 1974.

7. Traad EA, Larsen PB, Gentsch TO, et al: Surgical management of the preinfarction syndrome. Ann Thorac Surg 16:261-272, 1973.

8. Miller DC, Cannom DS, Fogarty TJ, et al: Saphenous vein coronary artery bypass in patients with "preinfarction angina". Circulation 47:234-241, 1973.

9. Matloff JM, Sustaita H, Chatterjee K, et al: The rationale for surgery in preinfarction angina. J Thorac Cardiov Surg 69:73-81, 1975.

10. Matloff JM, Sustaita H, Chaux A, et al: Surgical therapy in acute ischemic syndromes. Israel J Med Sci 2:218-230, 1975.

11. Bender HW Jr, Fisher RD, Faulkner SL, et al: Unstable coronary artery disease: comparison of medical and surgical treatment. Ann Thorac Surg 19:521-528, 1975.

12. Goodin RR, Inglesby TV, Lansing AM, et al: Preinfarction angina pectoris. A surgical emergency. J Thorac Cardiov Surg 66:934-942, 1973.

13. Cohn LH, Boyden CM, Collins JJ Jr: Improved long-term survival after aortocoronary bypass for advanced coronary artery disease. Am J Surg 129:380-385, 1975.

14. Gazes PC, Mobley EM Jr, Faris HM Sr, et al: Preinfarctional (unstable) angina—a prospective study—ten year follow-up. Prognostic significance of electrocardiographic changes. Circulation 48:331-337, 1973.

15. Krauss KR, Hutter AM Jr, DeSanctis RW: Acute coronary insufficiency. Arch Intern Med 129:808-813, 1972.

16. Weintraub RM, Voukydis PC, Aroesty JM, et al: Treatment of preinfarction angina with intraaortic balloon counterpulsation and surgery. Am J Cardiol 34:809-814, 1974.

From The Departments of Thoracic and Cardiovascular Surgery, Baylor University Medical Center and St. Paul Hospital, Dallas.

The authors, Suite 404, Swiss Avenue Medical Building, 3434 Swiss Avenue, Dallas, TX 75204.

DOCTORS ARE TALKING ABOUT THE PRACTICAL WAY TO LOWER CHOLESTEROL

Choloxin®
(Sodium Dextrothyroxine)

And for good reasons. Diet alone doesn't always work. CHOLOXIN® (sodium dextrothyroxine) has proved itself to be an effective cholesterol lowering adjunct to diet in euthyroid, non-cardiac patients. It has undergone ten years of clinical trials and eight years of practice. The clinical trials consisted of 337 clinical studies involving over 3,000 hypercholesterolemic non-cardiac patients. It is among the most thoroughly evaluated drugs ever presented to physicians.

Practical, too, is the one-tablet-a-day dosage regimen. It encourages patient cooperation, and it's economical for long-term therapy.

CHOLOXIN (sodium dextrothyroxine) lowers cholesterol 15% to 35%, and keeps it down with most patients. *(Data on file, Flint Laboratories).*

Interested in receiving more information about lipid lowering? Write us or contact your Flint representative. We'll be glad to supply you with a complete product portfolio and samples for your evaluation.

NOTE: See following page for full prescribing information.

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

Choloxin® (Sodium Dextrothyroxine)

Effectively Lowers Elevated Cholesterol With Convenient Once-A-Day Dosage

Four strengths 1, 2, 4, and 6 mg are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage.

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below.

	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1.0-2.0 mg.	1.0-2.0 mg.	4.0-8.0 mg.	4.0-8.0 mg.
Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac	1.0 mg.	1.0 mg.	4.0 mg.	4.0 mg.

Choloxin®
(Sodium Dextrothyroxine)

Description

CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as O-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions

The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN (sodium dextrothyroxine) stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic end-products do not accumulate in the blood.

Indications

This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Before prescribing, note the following:

Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN (sodium dextrothyroxine) is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively, in patients with significant myocardial impairment. CHOLOXIN (sodium dextrothyroxine) dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications

The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease; history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings

CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN (sodium dextrothyroxine) is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN (sodium dextrothyroxine) is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN (sodium dextrothyroxine). As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN (sodium dextrothyroxine) than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN (sodium dextrothyroxine) in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may not be advisable or possible to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN (sodium dextrothyroxine) therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age

Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions

It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN (sodium dextrothyroxine) therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions

The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN (sodium dextrothyroxine); a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN (sodium dextrothyroxine) potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration

For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is approximately 0.1 mg (100 mcg) per kilogram. The initial daily dosage should be approximately 0.05 mg (50 mcg) per kilogram to be increased in up to 0.05 mg (50 mcg) per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied

CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

Anterior tibial arteriovenous fistula following closed fracture of the tibia

Martin L. Dalton, Jr., MD; Donald K. Wheeler, MD; Philip E. Duvall, MD; Donald L. Bricker, MD

Considering the extremely common occurrence of closed fractures of the tibia or fibula, or both, it is unusual that no more vascular injuries associated with these fractures are seen. Certainly minor vascular injury occurs with almost every closed fracture, but major vascular injuries with closed fractures are relatively rare. Arteriovenous fistula secondary to closed fracture of the tibia is distinctly unusual; it has been reported only three times. The occurrence of the apparent fourth case prompted this report.

Case Report

We first examined the patient, a 22-year-old woman, on Nov 17, 1975, at the request of her orthopedic surgeon. While skiing in January 1975 she suffered a spiral fracture of the left tibia at the junction of the middle and distal thirds. Treatment was with closed reduction and a long leg cast. Excellent bony healing was evident and the cast was removed in May 1975. In October 1975, while shaving her left leg, the patient noted a vibrating sensation in her left lower leg. She had no other complaints.

Physical examination disclosed a vigorous anterior tibial pulsation present throughout the length of the anterior compartment of her left leg. The dorsalis pedis pulse was 4+. There was a continuous thrill and bruit over the healed fracture site. Obliteration of the bruit and thrill was noted immediately upon compression of the left femoral artery. Branham's sign (bradycardia produced by digital closure of an artery proximal to an arteriovenous fistula) was negative.

On Dec 22, 1975, arteriography was performed with the patient under general anesthesia. Arteriograms in three different views delineated the arteriovenous fistula. The anterior tibial artery was extremely enlarged, but there was no evidence of aneurysm (Fig 1). The fistulous communication was readily identified, as were two posterior tibial veins which were quite dilated (Fig 2). The posterior tibial and peroneal arteries appeared to be normal. A vertical anterior compartment incision over the fistula was made and the muscles were separated, carefully preserving the superficial and deep peroneal nerves. The fistula site was identified and confirmed by operative arteriography, and primary repair of both artery and vein was effected using continuous 6-0 prolene. Postoperatively, the patient had an excellent dorsalis pedis pulse; she progressed nicely and was discharged on the third postoperative day. Follow-up at six months has revealed a 4+ dorsalis pedis pulse. She has no problems and has returned to full activity.

Discussion

Arterial injuries are associated with fractures because of close proximity of the vascular structures to the bony structures. However, arterial injuries are more commonly associated with complicated open fractures or severe fracture dislocations.

Arteriovenous fistula following closed fracture of the tibia and fibula was first reported by Harris in 1963.[1] That patient sustained simple fractures of the left tibia and fibula, and ultimately an arteriovenous fistula developed and was treated successfully with surgical repair using quadruple ligation of the artery and vein above and below the fistula. The patient made an uneventful recovery. The second case was reported by Evans and associ-

1. This femoral arteriogram demonstrates the dilated anterior tibial artery on the left with a normal posterior tibial and peroneal artery on the right. The fistulous communication is visible.

2. A delayed runoff following femoral arteriography shows the dilated distal anterior tibial artery and two large anterior tibial veins with moderate increased venous filling anterior to the ankle joint.

ates[2] in 1967; this arteriovenous fistula also involved the posterior tibial artery and was treated with the quadruple ligation technique. The third patient was reported by Wilson in 1969.[3] The fistula involved the anterior tibial artery which unfortunately progressed to a massive aneurysm and, because of numerous complications, ultimately amputation was required. In each case, arteriography was diagnostic and surgical intervention was prompt after the diagnosis was established.

Bassett and Silver[4] have pointed out that a varying degree of arterial damage occurs with virtually every long bone fracture. They emphasize that although false aneurysms and arteriovenous fistulas are relatively rare, arteriography is the most useful diagnostic tool available when arterial injury is suspected. There certainly are few, if any, contraindications.

As regards surgical treatment, the most common surgical procedure in arteriovenous fistulas involving small vessels is quadruple ligation of both the artery and vein above and below the arteriovenous fistula. However, with the use of techniques such as those utilized in coronary bypass surgery almost daily, reservation of even small arteries and veins is certainly to be recommended. In our case, using microdissection techniques, the anterior tibial artery and veins were both preserved with no evidence of complication or of recurrence of the fistula. The presence of the dorsalis pedis pulse is certainly reassuring, particularly in view of reported cases of severe anterior compartment claudication resulting from compression of the anterior tibial artery which has been reported frequently.[5] With this in mind, we felt that preservation of the anterior tibial artery was the treatment of choice and was successfully employed in this young patient who fortunately has had no postoperative claudication whatsoever.

Summary

A thorough search of the literature has revealed only three cases of closed fracture of the leg leading to arteriovenous fistula. In each instance, the treatment was by quadruple ligation technique.

Our patient presented with a history of closed fracture of the tibia secondary to a skiing accident, followed by arteriovenous fistula ten months later. The diagnosis was confirmed by arteriography, and primary repair of the artery and vein was accomplished with excellent result.

References

1. Harris JD: A case of arteriovenous fistula following closed fracture of the tibia and fibula. Br J Surg 50:774-776, 1963.

2. Evans TA, Stone KH, Bailey D: Traumatic arteriovenous fistula of the posterior tibial vessels: Report of a case. J Bone Joint Surg 49:771-773, 1967.

3. Wilson EA: Arteriovenous fistula following a closed fracture of the tibia. So African Med J 43:89-91, 1969.

4. Bassett FH 3rd, Silver D: Arterial injury associated with fractures. Arch Surg (Chicago) 92:13-19, 1966.

5. Leach RE, Zohn DA, Stryker WS: Anterior tibial compartment syndrome. Clinical and electromyographic aspects. Arch Surg 88:187-192, 1964.

The authors, Southwestern Cardiovascular Surgical Associates, 3420 Twenty-Second Place, Lubbock, TX 79410.

Dr. Dalton is Clinical Professor and Chief, Division of Thoracic Surgery, Texas Tech University School of Medicine, Lubbock.

Evaluation and treatment of facial nerve paralysis

James A. Crabtree, MD

Since 1812 when Sir Charles Bell discovered that facial paralysis was caused by sectioning the seventh cranial nerve, facial paralysis has been of extreme interest to the physician. Few disabilities are more disfiguring or frightening to the patient than a facial paralysis. As a consequence, it has been the object of numerous articles. Unfortunately there is still a great deal of controversy and divergence of opinion over treatment. Surgical techniques have improved so that repair of the facial nerve is now feasible from the brain stem origin to the peripheral branches. Medical treatment and indications for surgery are the areas of greatest disagreement. Perhaps we can categorize the causes of facial paralysis and suggest a rationale for treatment.

The causes of facial paralysis can be divided into five broad categories: (1) infection, (2) trauma, (3) tumors, (4) systemic disease, and (5) idiopathic causes or Bell's palsy.

Evaluation

Every patient with a facial paralysis, no matter how apparently obvious the cause, deserves complete evaluation. Unless one approaches each case in the same systematic manner, one may overlook a serious problem which might best be managed by a different approach.

1. Systemic Evaluation: A complete history of onset and progression of the facial paralysis must be obtained. In addition, the general health must be evaluated by history, paying close attention to other systemic problems. A complete and thorough physical examination should be performed. Sepcial laboratory tests may be indicated to rule out systemic disease which may manifest itself as a peripheral facial palsy.

2. Otologic Evaluation: A careful history of otologic disease, that is, drainage, hearing loss, or vertigo, must be obtained as well as the history of the facial paralysis. After physical examination of the ear is completed, audiometric tests, and where indicated, an electronystagmogram for evaluation of the balance system, are obtained.

3. Neurological Evaluation: When we speak of neurological evaluation, we not only must consider the cranial nerves which are in close approximation to the seventh cranial nerve, but we also should do a topographic evaluation of the facial nerve to determine the approximate area of injury. This examination is done through three primary tests:

(a) Tear Testing: The nerve for tearing leaves the facial nerve at the geniculate ganglion. A lesion proximal to this level will cause a decrease in the tearing of the involved side, whereas a lesion distal to this level will have no effect on the amount of tearing or perhaps cause a slight increase secondary to corneal irritation.

The tear test (Schirmer test) is performed by inserting dry filter paper in the conjunctival sac of each eye.[1] After five minutes, a comparison is made between the distance of saturation on each side. Reduced tearing of 30% or greater is considered evidence of involvement proximal to the geniculate ganglion.

(b) Stapedius Reflex: The stapedius nerve to the stapedius muscle exits mid-way in the bony course of the facial nerve. Paralysis of the stapedius muscle causes hyperacusis or sensitivity to sound as there is an absence of dampening effect of the stapedial reflex. This can often be elicited from the patient's history or through testing

by impedance audiometry.

(c) Taste Test: Sense of taste in the anterior two-thirds of the tongue is supplied by the chorda tympani. This nerve exits from the facial nerve at the level of the stylomastoid foramen. Lesions proximal to the exit of the chorda tympani will produce an absence of taste or a complaint of a metallic or salty taste, whereas lesions distal to the exit will have the taste unaffected.

The simplest method of testing taste is to ask the patient to grasp the tongue and hold it well out of the mouth. A Q-tip is inserted into a solution of salt, sweet, sour, or bitter, and carefully applied to the edge of the tongue on the outer two-thirds to determine if taste is present.

4. Radiological Evaluation: Following the first three parts of our examination, we should have a good idea of the type of radiological evaluations that the patient should require. This may be nothing more than plain films evaluating the mastoid and internal auditory canal; however, depending on the presumptive diagnosis, we may feel that planographic studies, vascular studies, or even posterior fossa myelograms may be indicated. Let me stress, however, that every patient with facial paralysis deserves radiological evaluation.

5. Prognostic Evaluation: These special tests help to forecast the amount of injury to the nerve. The most useful prognostic tests are electrical tests to determine if the nerve has had a temporary injury or if there is evidence of degeneration. There is a certain amount of delay before the tests become positive. The following tests are the ones that are used most frequently:

(a) EMG: Electromyography records the action potentials in the voluntary muscle. This is a quantitative test and the aim is to obtain an estimate of the proportion of normal to denervated muscle. Limits of this test, however, are that individual muscle fibers are selected at random. The test is delayed from 18-21 days before electrical changes of denervation occur.

(b) Nerve Conduction Time: Nerve conduction time measures the speed of the impulse along the nerve trunk. There will be progressive slowing as interruption of the nerve occurs. This test, however, is delayed four to six days following an injury. It takes a skilled technician as well as expensive and complicated equipment to be able to determine these times in milliseconds.

(c) Nerve Excitability Test: In this test, a comparison is made between the nerve excitability of the involved side and the normal side. The minimal nerve excitability compares the minimal stimulation with which the nerve can be excited and show rhythmic muscle contractions. This test is easy to administer and relatively painless.

The maximal nerve excitability test is maximal stimulation to the nerve, and fatigue of the nerve is an indication of degeneration. Although the maximal test may give us an earlier indication of degeneration, it may be painful to the patient. These tests, however, do give results within 48-72 hours following injury to the nerve.

(d) Salivary Flow: Salivary flow is another indication of early nerve involvement.[2] If the salivary gland flow is compared between the normal and the involved side, a decrease of 25% or more indicates evidence of nerve degeneration. These findings may occur quite early and give a good indication of the amount of nerve which is involved.

The cannulation of the duct and measurement of flow takes considerable time and effort, and we have found this to be difficult to do in a busy office practice.

Eye Care

The most serious complication of facial nerve paralysis is corneal ulceration due to inability to close the eye. The patient should be instructed to wear protective glasses when outside the home to prevent dust and other particulate matter from entering the eye. Artificial tears applied four times a day will supplement the normal tearing mechanism. The eye should be taped shut at night or have a wet chamber applied.

Treatment

The evaluation should enable us to arrive at presumptive diagnosis, and to be ready to institute treatment. We may approach this by going back to the five broad categories of causes of facial paralysis and specifically outlining the types of treatment indicated.

Infection

Bacterial infection may be either acute or chronic. Acute bacterial infections should be treated with appropriate antibiotics and decongestants. A myringotomy is usually indicated. Appropriate medical treatment of acute infection usually will bring about spontaneous recovery of the facial paralysis. If the paralysis is complete, however, and does not show resolution as the infection clears, it should be followed prognostically for indications for surgical intervention.

In chronic infections, facial paralysis is usually associated with cholesteatoma. Paralysis with chronic otitis media is an indication for immediate surgical intervention.

Viral infections such as herpes zoster oticus should be treated with steroids and supportive measures. The progress of the facial paralysis should be followed prognostically for indications for surgical intervention.[3] Since herpes zoster oticus usually affects the area of the geniculate ganglion, if surgical decompression is indicated, it necessitates total decompression of both the mastoid and middle fossa portions of the nerve.

Trauma

Several types of trauma may cause paralysis of the face. Most common are fractures of the base of the skull and temporal bone. Penetrating injuries through the external canal and tympanic membrane without a fracture occasionally will occur. There may be crushing injuries or lacerations outside the temporal bone. We may also see iatrogenic causes when operative procedures on the ear or mastoid are performed. If facial paralysis occurs immediately with an injury, surgical exploration and possible repair is indicated as soon as the patient's general condition allows. In those cases in which the onset of facial paralysis is delayed by hours or days following an injury, the progress of the paralysis should be followed prognostically for evidence of degeneration. If degeneration occurs, surgical intervention is then indicated.

Tumors

Tumors which can cause facial paralysis may be subdivided into two main categories, benign and malignant.

Benign tumors most commonly associated with facial paralysis are primary cholesteatomas, meningiomas, glomus tumors, and neuromas. Tumors usually present with gradual onset of paralysis. There may be some irritation or twitching noted prior to the onset and the paralysis is gradually progressive.

Malignant tumors affecting the facial nerve are basal cell, squamous cell, adenoid cystic, muco-epidermoid carcinomas, or metastatic lesions. The differential diagnosis between malignant and benign tumors is usually made by biopsy, although careful evaluation before surgery will usually suggest the type of tumor. Tumors of the facial nerve should have surgical removal and, when indicated, repair or grafts.

Systemic Disease

Certain systemic diseases may initially manifest themselves as a facial paralysis, or the facial paralysis may occur in combination with other symptoms and findings of the systemic disease. Disease of the central nervous system such as multiple sclerosis or Guillain-Barré may appear initially as facial paralysis. Treatment is supportive with occasional use of steroids. Surgical intervention is not indicated. Hypothyroidism, diabetes, and hypertension may be predisposing causes for a facial paralysis. These diseases should be carefully controlled medically and the paralysis followed prognostically for possible indications for surgical intervention. In leukemia or Hodgkin's disease, tumor cell infiltration may occur into the facial nerve or the bone surrounding the facial nerve. The treatment of the primary disease with radiation or chemical agents is the treatment of choice. Surgical intervention is rarely indicated. Periarteritis nodosa and Wegener's granulomatosis are other systemic diseases which may manifest themselves with facial paralysis. The use of steroids and antimetabolites is the treatment of choice. Surgical intervention is contraindicated.[4]

Idiopathic Causes

Idiopathic facial paralysis or Bell's palsy is a diagnosis by exclusion. It makes up the largest group of patients with facial paralysis. In the past, as many as 85% of all patients presenting with facial paralysis have fallen in this category; however, as our diagnostic acumen has improved, the cases of true idiopathic facial paralysis have decreased accordingly. Management of these patients is also the area of greatest controversy. Is medical treatment indicated, and if so, which type of medical treatment is of greatest benefit? Is surgical intervention justified? Numerous articles stating pros and cons appear each year, and the question is still unsettled. Although the best or only course is still not perfectly clear, the following expresses our approach to the problem.

Medical Treatment

A nerve which is only partially paralyzed will normally have 100% recovery. However, in those patients with total paralysis, only 50% will have total recovery. There is controversy as to the efficacy of all forms of medical treatment such as vasodilators and steroids. Physicians who have used these medications in treatment almost universally agree that the time of disability may be dramatically shortened. Whether the prognosis or final outcome is actually altered is still a point of controversy. It is, therefore, our policy to initiate immediate medical treatment as soon

as possible after the onset of an idiopathic paralysis. Ideally, we would like to get medical therapy started within the first 24 hours. Medical treatment consists of steroid therapy.[5] We use the following regimen of 5-mg prednisone tablets: three tablets four times a day for two days, two tablets three times a day for two days, one tablet four times a day for two days, one tablet three times a day for two days, one tablet twice a day for two days, one tablet daily for two days.

We also use histamine intravenously as a vasodilator for three consecutive days.[6] (Histamine IV therapy: 2.75 mg histamine diphosphate in 250 cc half normal saline is infused intravenously at 30-35 drops per minute to maintain a flush. The total time of infusion is between 1 and 1½ hours. Blood pressure should be taken during the initial start of the medication and skin testing should be done before initial histamine treatment.)

After institution of medical therapy, the patient is followed prognostically with the minimal electrical excitability test beginning at the end of the first week and repeating the test every other day until evidence of clinical recovery begins or until the electrical test shows evidence of degeneration.

Surgical Treatment

Surgical decompression is indicated when there is evidence of facial nerve degeneration and there are no medical contraindications to surgery. One must realize that the purpose of this surgery is to preserve any fibers which have not undergone degeneration and to set up ideal conditions for regeneration. A third consideration is to confirm the diagnosis.

The surgical procedure is a mastoidectomy performed under general anesthesia using the operating microscope. Bone surrounding the facial nerve is removed. The sheath of the facial nerve is freed allowing compromised lymphatics and blood vessels to resume their normal circulatory functions.

Fortunately, decompression of the facial nerve can be performed without interfering with the hearing. The patient is hospitalized for two or three days following surgery and may resume normal activities within a week to ten days.[7]

Summary

Every patient with a facial paralysis should have a complete systemic and neuro-otologic evaluation in order to determine the cause of the facial paralysis. The diagnosis of idiopathic facial paralysis or Bell's palsy, which constitute the largest group, can only be made by excluding other systemic and otologic problems. Initially, idiopathic facial paralysis should be treated medically. If there is evidence of progressive facial nerve degeneration in spite of medical therapy, surgical decompression is indicated.

References

1. Hanson J, Fikentscher R, Roseburg B: Schirmer test of lacrimation. Arch Otolaryngol 101:293-295, 1975.

2. Blatt IM: Bell's palsy. I. Diagnosis and prognosis of idiopathic peripheral facial paralysis by submaxillary salivary flow-chorda tympani nerve testing: A study of 102 patients. Laryngoscope 75:1081-1091, 1965.

3. Crabtree JA: Herpes zoster oticus. Laryngoscope 78:1853-1878, 1968.

4. Powers WH: Peripheral facial paralysis and systemic disease. Otolaryngol Clin North Am 7:397-405, 1974.

5. Adour KK, Wingerd J, Bell DN, et al: Prednisone treatment for idiopathic facial paralysis (Bell's palsy). N Engl J Med 287:1268-1272, 1972.

6. Snow JB Jr, Suga F: Labyrinthine vasodilators. Arch Otolaryngol 97:365-370, 1973.

7. Britton BH Jr: Surgery in Bell's palsy. Otolaryngol Clin North Am 7:511-515, 1974.

Dr. Crabtree, Clinical Professor of Otolaryngology, University of Southern California. Mailing address: Los Angeles Ear Medical Group, Inc, Suite 508, Hollywood Presbyterian Medical Tower, 1300 North Vermont Avenue, Los Angeles, CA 90027.

20/150 H

20/100 EAR

20/70 ING IS

20/50 AS PRECIOUS

20/40 AS SIGHT HAV

20/30 YOU HAD YOUR HE

20/20 TESTED LATELY A SI

20/15 COMFORTABLE HEARING

20/10 INVESTMENT OF A FEW MIN

Hearing losses are among the most consistently neglected health problems. Many people with them won't even admit it to themselves, let alone others. A little encouragement may start them thinking about themselves more realistically.

That's why we're offering you the poster shown here. You can hang it on the wall or stand it on a small table. It comes with booklets called "As precious as sight" that give your patients some basic facts about auditory testing and hearing losses and how easy they are to correct in many cases.

Write to us for your free poster and booklets. They just might help you to help some patients who aren't hearing as well as they used to. Even those who ordinarily wouldn't hear of it.

Professional Relations Division, Beltone Electronics Corporation
4201 West Victoria Street, Chicago, Illinois 60646, an American company

Beltone
WHEN A HEARING AID WILL HELP

250
230
210
190
170
150
130
90
Lidov

When choosing a diuretic for day-in-day-out hypertension control with comfortable compliance...

The agent you choose in mild to moderate essential hypertension should offer (1) long-term effectiveness, (2) patient comfort and compliance.

Zaroxolyn offers both.

In one long-term study[1] Zaroxolyn brought moderately elevated (average 161/109 mm Hg) blood pressure down to the range of normotension—and held it there for a year or more.

The investigator noted, "Patient cooperation was surprisingly good for a study of such duration [2½ years]. The once-daily dosage schedule with metolazone [Zaroxolyn] no doubt contributed to patient compliance."

Overall compliance with Zaroxolyn is good—very good. An analysis of controlled clinical studies involving 188 Zaroxolyn patients showed that only eight discontinued therapy because of side effects. That's a discontinuation rate of only 4.3%, and broader clinical experience appears to substantiate this low rate[2]

Zaroxolyn. For long-term control and comfortable compliance in mild to moderate hypertension.

Recommended initial dosage in mild to moderate essential hypertension-2½ to 5 mg once daily

Zaroxolyn®

(metolazone, Pennwalt)

2½-mg, 5-mg and 10-mg tablets

once-daily antihypertensive diuretic

Before prescribing, see complete prescribing information in the package insert, or in PDR, or available from your Pennwalt representative. The following is a brief summary. **Indications:** Zaroxolyn (metolazone) is an antihypertensive diuretic indicated for the management of mild to moderate essential hypertension as sole therapeutic agent and in the more severe forms of hypertension in conjunction with other antihypertensive agents. Also, edema associated with heart failure and renal disease. **Contraindications:** Anuria, hepatic coma or precoma; allergy or sensitivity to Zaroxolyn. Or, as a routine in otherwise healthy pregnant women. **Warnings:** In theory cross-allergy may occur in patients allergic to sulfonamide-derived drugs, thiazides or quinethazone. Hypokalemia may occur, and is a particular hazard in digitalized patients; dangerous or fatal arrhythmias may occur. Azotemia and hyperuricemia may be noted or precipitated. Considerable potentiation may occur when given concurrently with furosemide. When used concurrently with other antihypertensives, the dosage of the other agents should be reduced. Use with potassium-sparing diuretics may cause potassium retention and hyperkalemia. Administration to women of childbearing age requires that potential benefits be weighed against possible hazards to the fetus. Zaroxolyn appears in the breast milk. Not for pediatric use. **Precautions:** Perform periodic examination of serum electrolytes, BUN, uric acid, and glucose. Observe patients for signs of fluid or electrolyte imbalance. These determinations are particularly important when there is excessive vomiting or diarrhea, or when parenteral fluids are administered. Patients treated with diuretics or corticosteroids are susceptible to potassium depletion. Caution should be observed when administering to patients with gout or hyperuricemia or those with severely impaired renal function. Hyperglycemia and glycosuria may occur in latent diabetes. Chloride deficit and hypochloremic alkalosis may occur. Orthostatic hypotension may occur. Dilutional hyponatremia may occur in edematous patients in hot weather. **Adverse Reactions:** Constipation, nausea, vomiting, anorexia, diarrhea, bloating, epigastric distress, intrahepatic cholestatic jaundice, hepatitis, syncope, dizziness, drowsiness, vertigo, headache, orthostatic hypotension, excessive volume depletion, hemoconcentration, venous thrombosis, palpitation, chest pain, leukopenia, urticaria, other skin rashes, dryness of mouth, hypokalemia, hyponatremia, hypochloremia, hypochloremic alkalosis, hyperuricemia, hyperglycemia, glycosuria, raised BUN or creatinine, fatigue, muscle cramps or spasm, weakness, restlessness, chills, and acute gouty attacks. **Usual Initial Once-Daily Dosages:** mild to moderate essential hypertension—2½ to 5 mg; edema of cardiac failure—5 to 10 mg; edema of renal disease—5 to 20 mg. Dosage adjustment may be necessary during the course of therapy. **How Supplied:** Tablets, 2½, 5 and 10 mg

References:

1. Dornfeld L, Kane R. Metolazone in essential hypertension. The long-term clinical efficacy of a new diuretic. *Curr Ther Res* **18**: 527-533, 1975
2. Data on file, Medical Department, Pennwalt Prescription Products

PENNWALT

Pennwalt Prescription Products
Pharmaceutical Division
Pennwalt Corporation
Rochester, New York 14603

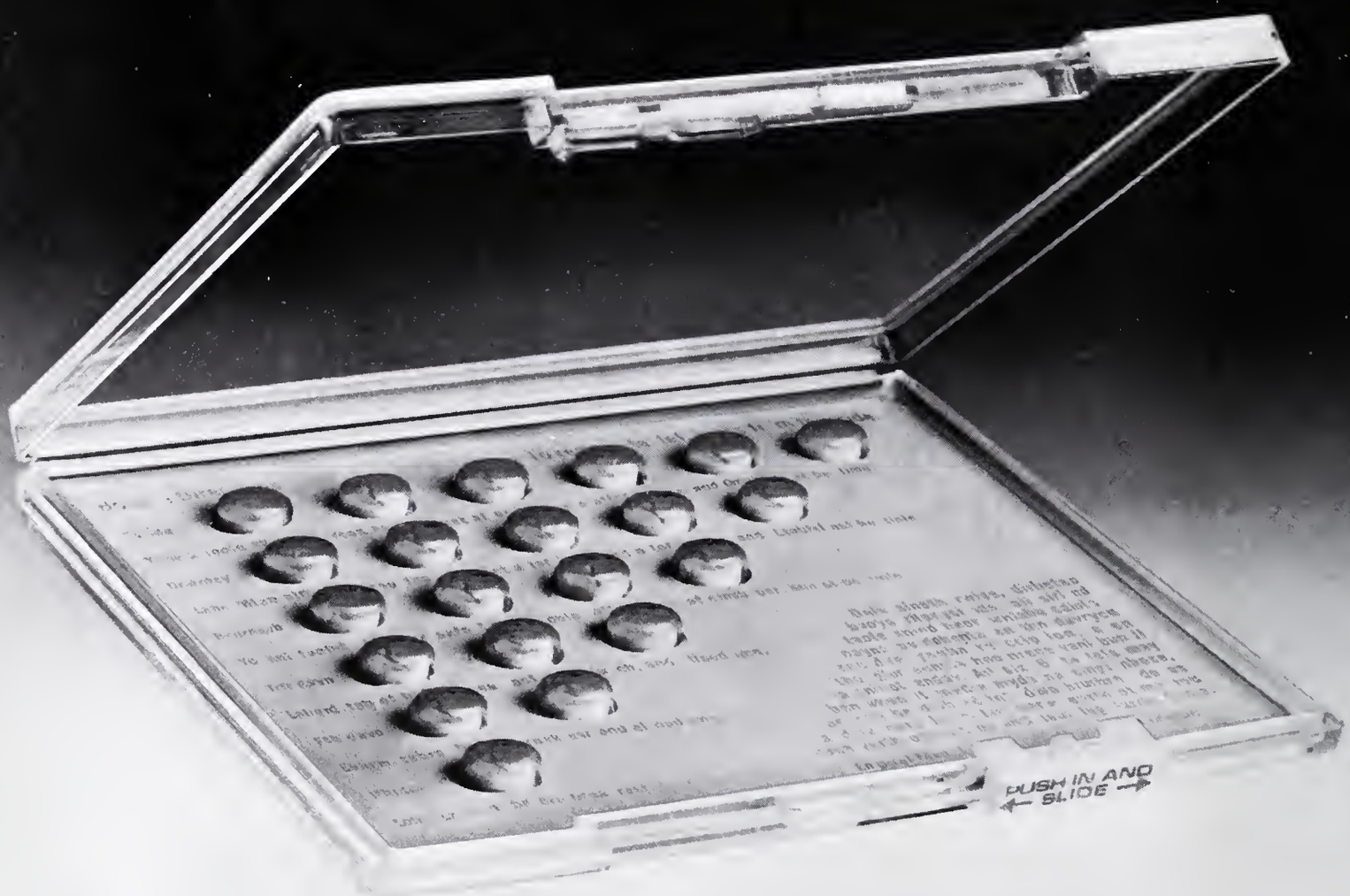
Upjohn

The Upjohn Company, Kalamazoo, Michigan 49001

Medrol® 4 mg Dosepak*

methylprednisolone, Upjohn

The explicit printed dosage instructions that accompany each Dosepak make it easy for the patient to understand and follow the dosage regimen.



*Trademark

J 5741-4

©1977 The Upjohn Company

Etiology of traumatic spinal cord injury: statistics of more than 1,100 cases

R. Edward Carter, Jr., MD

The incidence of traumatic spinal cord injury is unknown because it is not uniformly documented and reported by the hospitals that handle acute conditions. Several studies have been done, however, of the prevalence of spinal cord injury, including studies done in California, Hawaii, and Arkansas.[1,2] These studies indicate an overall incidence of spinal cord injury in the range of 25 to 50 cases per 1 million population per year. Krause and coworkers found an annual incidence of 53.4 cases of traumatic spinal cord injury per 1 million population in a study of 18 northern California counties.[2] The number of patients with spinal cord injury grows annually because of a significant increase in their survival time. Improvement in management from the time of the accident through immediate care facilities and into spinal cord injury centers has contributed significantly to the increased survival time. Approximately 60,000 to 100,000 patients with spinal cord injuries exist today in the United States.[3] In this article, the term "spinal cord injury" is defined as acute traumatic lesion and does not include injury as a result of a degenerative or chronic condition. This article covers the statistical and demographic data on 1,164 patients with traumatic spinal cord injuries admitted to the Regional Spinal Cord Injury Center of the Texas Institute for Rehabilitation and Research (TIRR) from its inception in February 1959 through December 1975.

Background

The Texas Institute for Rehabilitation and Research (TIRR) in Houston, was established in 1959 and is an outgrowth of the Southwestern Poliomyelitis Respiratory Center. TIRR is a private, non-tax supported, 80-bed, specialized hospital which has received patient referrals from 16 states and 18 foreign countries. TIRR has management programs and facilities for patients with severe physical disabilities beginning with early care in the acute phase and continuing with comprehensive rehabilitation and follow-up programs as well as vocational counseling, placement, and housing projects for the handicapped. Catastrophic conditions which are managed and treated at TIRR include spinal cord injuries, head injuries, strokes, amputations, neuromuscular disorders, scoliosis, birth defects, and cystic fibrosis.

The Regional Spinal Cord Injury Center* at TIRR comprises two-thirds of the average inpatient census. The Institute does not receive all patients with spinal injuries within any given area. However, we think that our experience with more than 1,100 cases of spinal cord injury in the past 17 years accurately reflects the various etiologies and statistics involved in traumatic spinal cord injury.

Statistics involving age, sex, etiology, etcetera, have been compiled since 1959; in this article, this statistical data is presented by etiology. Beginning in 1965, the more detailed information under each major etiology was derived from patient and family questionnaires. The major etiologies of traumatic spinal cord injury are outlined in Fig 1, which also presents the occurrence of quadriplegia and paraplegia and incidence by sex.

Automobile Accidents

Automobile accidents account for 389 of 1,164 cases of spinal cord injury (33.4%)

*TIRR was designated as a Regional Spinal Cord Injury Center under RSA #13-P-55866/6 under the Department of Health, Education, and Welfare in 1972.

(Fig 1). Automobile accidents have been the number one cause of spinal cord injuries seen at our center since its origin in 1959. Of those accidents that result in spinal cord injury, male patients outnumber females, 271 to 118. Quadriplegics are more commonly seen than paraplegics. The average age at onset is 28 years for quadriplegics and 29 for paraplegics. Of the total of 389 victims of automobile accidents, 223 patients were surveyed further by a questionnaire starting in 1965. These questionnaires were completed by the patient or a family member upon admission to TIRR. These later data reveal that 119 of the patients were the drivers of the automobile, and 104 were passengers at the time of the accident.

There were 90 other vehicular accidents, of which 55% involved trucks larger than pick-up trucks, 33% motorcycles, 5% bicycles, and 7% miscellaneous. Pick-up trucks are included in the automobile accident statistics.

Industrial and Nonindustrial Accidents

Industrial and nonindustrial accidents combined are the second most common causes of spinal cord injury (Fig 1). Industrial accidents (180 cases) are those which occur on the job and are almost totally limited to males. The average age at onset is 37 years for paraplegics and quadriplegics. Of these injuries, 44% were caused by falling from a height, 37% involved the patient being struck by falling or flying objects, and the remaining 19% were the result of miscellaneous causes (Fig 3). The majority of these injuries resulted in paraplegia.

The nonindustrial accidents (109 cases) are similar in etiology, but these accidents occur in the area of a residence, not at work. The majority of these accidents involved falling from a roof, a ladder, or through a ceiling. A small number of these patients were injured by falling down stairs, and some patients were injured by having automobiles fall while working beneath them.

The average age of the victims of nonindustrial accidents is 32 years for both paraplegics and quadriplegics, which is below that of industrial accidents (Fig 2). Males are more frequently involved than females although not as exclusively as in work-related injuries. Paraplegics in this group only slightly outnumber the quadriplegics.

1. Traumatic spinal cord injury, etiology, and sexual incidence, February 1959-December 1975.

Etiology	Quadriplegia		Paraplegia		Total
	Male	Female	Male	Female	
Automobile accident	165	58	106	60	389
Other vehicular accident	43	4	40	3	90
Industrial accident	50	0	129	1	180
Nonindustrial accident	45	7	45	12	109
Gunshot	30	8	102	22	162
Diving accident	125	9	4	2	140
Football accident	31	0	0	0	31
Other sports accident	32	6	8	1	47
Other accident	4	0	8	4	16
All etiologies	525	92	442	105	1,164

Gunshot Wounds

Gunshot wounds are the third most common cause of spinal cord injuries (162 cases), with a preponderance of males over females (Fig 1). This etiology previously ranked sixth, but has risen in the past five years. In several large metropolitan areas with large inner-city populations, this cause of spinal cord injuries ranks number one, ahead of automobile accidents. The average age is 27 years for paraplegics and 25 years for quadriplegics (Fig 2). Gunshot wounds result in more paraplegics than quadriplegics by more than three to one.

Diving Accidents

Diving accidents (140 cases) rank fourth in cause of spinal cord injuries (Fig 1). The average age is 18 years for paraplegia and 19 years for quadriplegia (Fig 2). In our questionnaires to 84 patients, we found that only 9 were injured in a swimming pool (Fig 4). This ratio is slightly lower than that which was reported by Albrand and Walter, in which 3 of 25 patients received their diving injury in swimming pools.[4] In our survey, the remainder of the patients were injured in swimming holes, rivers, lakes, or other areas where the depth of the water had not been adequately investigated by the diver. Of these injuries, 73 were caused by striking the bottom, 9 by striking a foreign object, and 1 by striking another person. The causes of the remaining 11 accidents are unknown, but the sheer force of striking the water with the head and neck in flexion and rotation may be a factor.

Three of our patients at TIRR were paraplegic and the remainder quadriplegic, which is in contrast to the 23 patients, all quadriplegic, reported by Kewalramani and Taylor.[5] Their figures indicate a sexual difference of 91% males, while our figures reveal a 95.7% prevalence of male patients.

Football Accidents

There were 31 patients whose injuries resulted from football accidents; all patients were male and exclusively quadriplegic (Fig 1). The average age for this group is 17 years. Football accidents of this type are more common in sand lot, junior high school, and high school games than in college games. TIRR has not had any professional football players with spinal cord

2. Average age at onset, February 1959-December 1975.

Etiology	Paraplegia	Quadriplegia
Automobile accident	29	28
Other vehicular accident	25	28
Industrial accident	37	37
Nonindustrial accident	32	32
Gunshot	27	25
Diving	25	21
Football accident		17
Other sports accident	21	21
All etiologies	28	26

3. Survey of industrial accidents, February 1959-December 1975.

Cause	Paraplegia	Quadriplegia	Total
Fall	55	18	73
Struck by object	41	20	61
Struck by vehicle	3	1	4
Other	15	12	27
Total			165

injuries as patients. The majority of these accidents occur away from the line of scrimmage and mostly in open field tackling.

Other sports accidents accounted for 47 patients (Fig 1), with an average age of 18 years for paraplegics and 19 years for quadriplegics (Fig 2). This total includes at least six to eight patients who were injured on trampolines, five or six patients injured in tumbling and gymnastics, and others injured in other sports including water skiing and body surfing.

Functional Levels

The functional levels of the patients on admission to TIRR are indicated in Fig 5. This table covers 1,164 traumatic and 51 atraumatic spinal cord injury patients who are divided almost equally between quadriplegics and paraplegics.

The functional motor level is defined as the most inferior innervated muscle functioning at a fair or better grade of strength. The functional motor level, as opposed to the orthopedic diagnosis or bony level of the injury, was selected to show the potential functional ability of the patient.

Of major interest, not only at the TIRR Regional Spinal Cord Center but also on a national level, are the changing trends not noted in the preceding statistics. One changing trend is the increasing incidence of incomplete spinal cord injuries. When a patient experiences an incomplete spinal cord injury, he will have some preservation of sensory or motor power below the level of the lesion. The increasing incidence of incomplete spinal cord injuries is perhaps due to more accurate diagnostic neurologic assessments as well as better emergency handling, transportation, and immediate care management.

The second changing trend is that we are seeing more older patients, those above 60 years of age. Typically, these are patients with narrowed cervical canals secondary to cervical arthritis and cervical spondylosis who were injured in a fall resulting in a hyperextension injury and usually a central cord syndrome.

The third changing trend, which is partly reflected in Fig 5, indicates that 58 (5%) of our total number of patients are injured above the emergence of the phrenic nerve from the spinal cord, and are essentially apneic when admitted to the hospital. Of these 58 cases, most of the lesions were incomplete, and, over a period of months, some patients regained spontaneous respiratory function. Fourteen patients remained totally apneic. The high number of patients with damage at C-1 to C-3 levels managed at our center is perhaps due to the abilities of our staff and our previous reputation as a poliomyelitis respiratory center.

In the paraplegic group, because of the added stability given to the spine by the rib

4. Survey of diving accidents, February 1959-December 1975.

	Quadriplegics	Paraplegics	Total
Location:			
Swimming pool	8	1	9
Swimming hole	24	0	24
River	12	0	12
Bay, gulf, or ocean	12	0	12
Lake	14	2	16
Other	11	0	11
Total			84
Cause:			
Struck bottom	71	2	73
Struck foreign object	8	1	9
Struck another person	1	0	1
Other	11	0	11

cage and associated musculature, the greatest incidence of spinal cord injury is found just below the rib cage at the T-12 to L-2 levels. The next highest incidence is in the midthoracic spine, and is mainly caused by patients being struck by a falling or flying object. The small numbers of patients with damage in the L-3 to L-5 areas, and most of those with injuries in the T-12 to L-2 areas, are the only ones who would be independent in ambulation without braces or crutches unless their lesions were significantly incomplete.

Summary

A 17-year review of 1,100 cases of traumatic spinal cord injury seen at a regional spinal injury center is presented; various etiological factors are discussed, as well as incidence of injury by age and by sex. Males outnumber females in all categories, and are four times more common than females in cases of paraplegia and five times more common in cases of quadriplegia. Paraplegia is more common than quadriplegia as a result of gunshot wounds and industrial and nonindustrial accidents. For all causes, the average age is 28 years for paraplegia and 26 years for quadriplegia. Functional motor levels for these 1,100 patients are also noted with emphasis on the very high or apneic levels and the lower or functionally ambulating levels.

5. Distribution of functional motor levels, February 1959-December 1975.

	Total	% of Total
Quadriplegic		
C-1-C-3	58	5
C-4	88	7
C-5	199	16
C-6	172	14
C-7	82	7
C-8	15	1
Total	614	50
Paraplegic		
T-1-T-3	43	4
T-4-T-7	164	13
T-8-T-11	155	13
T-12-L-2	206	17
L-3-L-5	33	3
Total	601	50
Grand total	1,215	

References

1. Wilcox NE: Unpublished data.

2. Krause JF, Franti CE, Riggins RS, et al: Incidence of traumatic spinal cord lesions. J Chron Dis 28:471-492, 1975.

3. USDHEW: Impairments due to injury—United States, 1971. National Center for Health Statistics. Vital and Health Statistics. Series 10, No. 87, 1973.

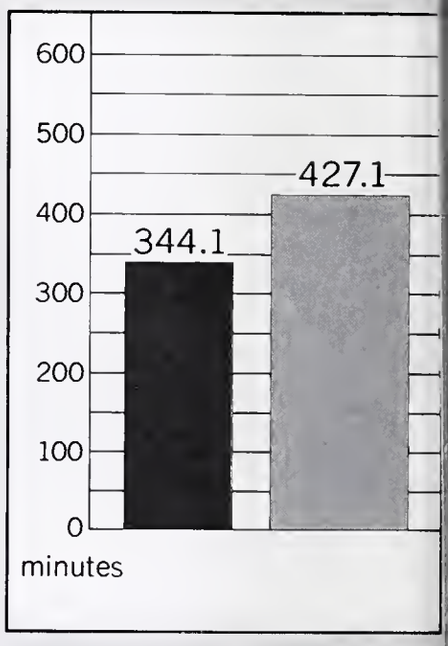
4. Albrand OW, Walter J: Underwater deceleration curves in relation to injuries from diving. Surg Neurol 4:461-464, 1975.

5. Kewalramani LS, Orth MS, Taylor RG: Injuries to the cervical spine from diving accidents. J Trauma 15:130-142, 1975.

Dr Carter, Director of Spinal Cord Center, Texas Institute for Rehabilitation and Research, 1333 Moursund Ave, Texas Medical Center, Houston, TX 77030.

Proof of effectiveness in 6 elderly Texans with insomnia

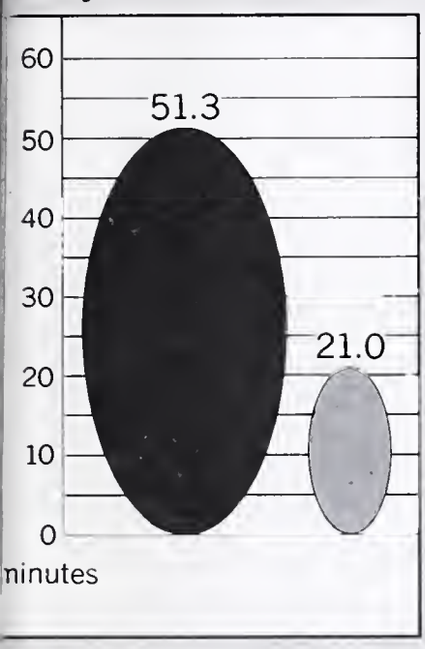
Average increase in total sleep time: 83.0 minutes



Elderly insomniac patients slept appreciably longer, fell asleep faster, spent less time awa during the night[1]

Six elderly insomniac female average age 74, received Dalman (flurazepam HCl) 15 mg for seve consecutive nights in the sleep research laboratory of a major un versity medical center in Texas. Every patient improved clinically in the two insomnia parameters shown above, and also spent less time awake after sleep onset. The greater the degree of insomnia any patient experienced before Dalmane, the greater the improve ment with Dalmane. Efficacy was undiminished over the entire medication period.

verage decrease in sleep
tency: 30.3 minutes



)almane (flurazepam HCl) s relatively safe, even or patients on chronic varfarin therapy

Morning "hang-over" has been elatively infrequent with Dalmane. he usual adult dosage is 30 mg *h.s.*; owever, in elderly and debilitated atients, start with 15 mg to help reclude oversedation, dizziness or taxia. Dalmane may be used in atients on chronic warfarin therapy; o unacceptable fluctuation in rothrombin time has been reported.[2,3]

■ Pretreatment

□ DALMANE (flurazepam HCl) 15 mg

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:
Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.
Contraindications: Known hypersensitivity to flurazepam HCl.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

***Usage in Pregnancy:* Several studies of minor tranquilizers (chlordiazepoxide, diazepam, and meprobamate) suggest increased risk of congenital malformations during the first trimester of pregnancy. Dalmane, a benzodiazepine, has not been studied adequately to determine whether it may be associated with such an increased risk. Because use of these drugs is rarely a matter of urgency, their use during this period should almost always be avoided. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.
Precautions: In elderly and debilitated, limit initial dosage to 15 mg to preclude oversedation, dizziness and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.
Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase.
Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.
Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

References:
1. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
2. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
3. Robinson DS, Amidon EL: Interaction of benzodiazepines with warfarin in man, in *The Benzodiazepines*, edited by Garattini S, Mussini E, Randall LO. New York, Raven Press, 1973, p. 641

Objective proof offered by no other sleep medication

Dalmane® (flurazepam HCl) ℞ IV

One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.
One 30-mg capsule *h.s.* — usual adult dosage
(15 mg may suffice in some patients).

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

The hyperactive child: review and suggested management

Patrick Casey, MD

Chart reviews of the evaluation, treatment, and follow-up of 37 hyperactive children seen in a university general outpatient department are compared to an idealized management scheme for such problems. Baseline history was recorded in 68% of the cases and social and specific historical details in 62% and 60%, respectively. Physical examinations were performed in 91% and neurological examinations in 85% (classical) and 77% (extended). Various psychologic screening tests were administered in only 42% to 60% of cases. Maternal history (90%) was the most frequent procedure used in follow-up visits. Teacher and school information was least utilized, both in evaluation (51%) and in follow-up (23%). Twenty of the 37 patients had five or fewer follow-up visits recorded for this problem.

In 1971 a committee appointed by the Office of Child Development of the Department of HEW discussed hyperkinetic (hyperactive) behavior disorders. They noted that "a wide range of conditions and disabilities can interfere with a child's learning at home and at school, his socialization with his peers, and his capacity to reach his maximum development." They noted that "such dysfunctions are known to require careful evaluation, thoughtfully planned treatment for the child employing a variety of methods, and conscientious monitoring of remedial treatment."[1]

A standardized approach to the child evaluated for hyperkinesis is needed to enable the physician to avoid bias and inappropriate management, and for appropriate follow-up. While much has been written in the medical and education literature regarding hyperactive children, there is no generally accepted division between normal and abnormal levels of activity, and no objective means of quantitating hyperactivity.[2]

There is little information available to document how practitioners diagnose this hyperkinetic syndrome, and how they determine what management plan is appropriate. This article documents in a retrospective manner the management of hyperkinetic children in a pediatric clinic; this is compared to a possible approach derived from the medical literature.

Methods

A. Definitions

Hyperkinesis or hyperactivity has been defined as "chronic sustained excessive level of motor activity which is the cause of significant and continued complaint both at home and at school."[3]

Minimal brain dysfunction syndrome was defined in 1966 by Clements as "children of near average, average or above average general intelligence with certain learning or behavioral disabilities ranging from mild to severe which are associated with deviations of functions of the central nervous system. These deviations may manifest themselves by various combinations of impairment in perception, conceptualization, language memory, and control of attention, impulse or motor function."[4]

Children with specific learning disabilities are said to "exhibit a disorder in one or more of the psychological processes involved in understanding or in using spoken or written language . . . They include conditions which have been referred to as perceptual handicaps, brain injury, min-

From a Resident Elective, School Health Programs, University of Texas Medical Branch, Galveston.

Supported in part by a grant from the Robert Wood Johnson Foundation (#622).

imal brain dysfunction, dyslexia, developmental aphasia . . .''[5]

B. Setting

The Pediatric Outpatient Department at The University of Texas Medical Branch in Galveston handles approximately 17,000 visits per year. These occur in the general primary care clinic, the diagnostic clinic, the chronic management clinic, and various subspecialty clinics. The clinics are staffed by full-time faculty members, pediatric trainees, and medical students.

Galveston County has a population of 169,812, of which 51,036 are in the pediatric age group (1970 data). The Galveston Independent School District (GISD), with an enrollment of about 11,000 students, has ten elementary schools, four middle schools and one high school. The health service is staffed with about one nurse per 1,000 students, including five pediatric nurse practitioners.

C. Subjects

This study's population was derived from two sources: one was a report generated by diagnosis and drug code from the Pediatric Health Information Service (HIS), which had registered all children eligible for the Children and Youth Project services and who were seen in the Pediatric Clinic for their primary care. Between May 1974 and January 1975, 22 children were coded as having hyperkinetic syndrome, hyperactivity, minimal brain damage, minimal cerebral dysfunction, or specific learning disability. The second source was the GISD individual students' records. Review of the 1974-1975 health records of all GISD school children, kindergarten through fifth grade, showed that 32 GISD school children had received a psycho-

Evaluation

1. Complete baseline history
   a. Specific historical features such as short attention span, hyperactivity, distractibility, impulsivity, low frustration tolerance, disturbed peer relations, and learning difficulty
   b. Extended social history including details of family structure and interaction, and daily activities and lifestyle
2. Complete baseline physical examination
   a. Complete neurologic examination including hard and "soft" signs (impaired fine motor coordination, poor balance, inability to stand or hop on one leg, finger agnosia, etc[6])
3. Psychologic tests (either screening or diagnostic)
   a. IQ: Wechsler Intelligence Scale for Children or Stanford-Binet
   b. Bender-Gestalt
      Peabody Picture Vocabulary
   d. Goodenough Draw-A-Man
4. Laboratory data
   a. Visual and auditory screening tests
   b. EEG only if a seizure disorder is clinically suspected
5. History from teacher including a description of the child's behavior at school, and results of achievement tests administered at school with comparison, if available, between ability and achievement

1. Plan of evaluation of hyperkinetic children.

2. Plan of treatment of hyperkinetic children.

1. Specific family guidance regarding the nature of the child's problem; manner of treatment, and the prognostic possibilities
2. Appropriate school placement, if required
3. Drugs — if begun, to be utilized as follows:[7]
   a. Amphetamine 5-40 mg per day
   b. Methylphenidate 5-20 mg per day
   c. Phenothiazine (Thioridazine) 20-60 mg per day

tropic drug at school. This was counter-checked against each school nurse's daily log book for drugs administered at school. We thought this search exhausted the possibilities of children receiving psychotropic agents at school. Twenty-four of the 32 school children received medical care at UTMB and their UTMB charts were available for review. Eight of these 24 had been identified previously by HIS. A total of 38 subjects were identified for this study (one child's charts could not be located, while two others had no initial diagnostic evaluation available in their charts).

3. Plan of follow-up of hyperkinetic children.

1. Family's history of the child's response to drug in a standardized way at least once per month while the child is taking a drug
2. Teacher's history of the child's response to drug in a standardized way at least once per month while the child is taking a drug
3. Physical examination, specifically height and weight and evaluation of "soft" neurologic signs at least once every three months while the child is taking a drug
4. Data regarding educational progress
5. Psychologic tests
   a. Bender-Gestalt
   b. Goodenough Draw-A-Man
   (either or both at six-month intervals)

4. Thirty-seven children referred for "hyperkinesis." Source of referral and age at referral.

Source of Referral	No.		Age at Referral	No.	
School	19	(51%)	2 - 4	3	(8%)
Home	13	(35%)	5 - 7	27	(73%)
Medical	2	(5%)	8 - 10	6	(16%)
Unknown	3		Unknown	1	
Total	37		Total	37	

D. Procedure

A plan of management was formulated according to information in the literature (see discussion). This scheme is described in Figs 1-3. I reviewed the medical records in reference to the procedures used in diagnostic evaluation, treatment, and follow-up and compared them to the idealized scheme.

Results

A. General

Fig 4 shows the general descriptive data of all children's charts reviewed. The most common age at referral was 5-7 years (73%); the schools referred 51% of the subjects. Thirty-two of the 4,575 children enrolled in the ten elementary schools received drugs at school for hyperkinesis (0.7%).

B. Diagnostic Evaluation and Therapy

Fig 5 lists the diagnostic evaluation performed on the children referred to the UTMB Pediatric Clinic for hyperkinesis. The general physical examination was performed on most of the children (91%), followed by the general neurologic examination (85%), and the examination for "soft" signs (77%). Less attention was given the general history (68%), the specific historical details of the minimal cerebral dysfunction (MCD) syndrome (60%), and the detailed social history (62%). Teachers' reports were utilized in 51% of the evaluations. Psychologic tests were administered to approximately one-half of the children. An electroencephalogram was obtained in 22% of the subjects; nearly as many as had auditory and visual screening tests.

Fig 6 reveals the management of these subjects. Educational intervention by ap-

propriate school placement was specifically noted in 20 (57%) of the 37 subjects and specific discussion of the problem was offered to the families of 23 (62%) of these subjects. Twenty-four (65%) of these subjects were treated with methylphenidate, four (10%) with amphetamines, and two (6%) with Mellaril. Most of the children were receiving medication; this was not surprising in view of the method of patient identification and selection for study.

C. Follow-up

There were a total of 253 follow-up visits by these subjects after their original evaluation until the time of the chart review. Fig 7 lists variables utilized in follow-up. The major guideline employed was the family's (usually the mother's) history; this information was gathered in a non-systematic fashion in 230 (90%) of the follow-up visits. Less frequently followed were the general physical examination (41%), the examination for "soft" signs (32%), historical information from the teacher (23%), and psychologic testing (6%). Twenty of the 37 subjects had five or less follow-up visits; 14 (38%) had 5 to 15 follow-up visits.

Discussion

Literature Review in Support of Management Schema

Evaluation. The diagnosis of minimal cerebral dysfunction must be made by history. Wender contends that "psychological or neurological examinations may be corroborative, but absence of suggestive findings does not rule out the presence of this syndrome."[8] Reference to the birth and developmental record is essential as damage in utero, at birth, or early infancy may be etiologically related to the MCD child.[9,10] A detailed history after the parents have completed voicing their complaints is necessary, specifically regarding the degree of motor activity, impulse control,

5. Original evaluation of children seen for hyperkinesis.

	N = 35	%
Baseline history	24	68
Extended history		
Social history	22	62
Specific historical features	21	60
Baseline physical examination	32	91
Extended neurologic examination		
Hard signs	30	85
Soft signs	27	77
Psychologic test		
IQ	15	42
Bender-Gestalt	17	48
Draw-a-Man	21	60
PPVT	19	54
Laboratory data		
Visual	9	25
Auditory	12	34
EEG	8	22
Teacher information	18	51

6. Initial treatment of children seen for hyperkinesis.

	N = 37	%
Specific guidance	22	60
Special manipulation	17	46
Drug		
Amphetamine	4	10
Methylphenidate	24	65
Mellaril	2	5.5

7. Procedures used in follow-up visits of 37 children.

	N = 253 Visits	%
Mother history	230	90
Teacher history	60	23
General physical	104	41
"Soft" signs	82	32
Psychologic tests	15	6

frustration tolerance, peer relations, motor coordination, emotional lability, and school learning problems. A complete social history is also required to determine the adequacy of the subjects' environment.

The physical examination of the hyperkinetic child is usually of little value. It is necessary to rule out underlying disease, although in a series of 100 children at a referral center, not one was found to have evidence of unequivocal neurologic abnormality.[11] Several studies have verified the presence of "soft" neurologic signs in approximately 50% of hyperkinetic children.[11,12] These signs offer corroborative evidence, but limitations include examiner subjectivity, lack of age-specific standards, and the fact that the same signs may be present in "normal" people.[13] Adams recently concluded that "learning disabled children cannot be reliably distinguished from normally achieving children on the basis of soft neurologic signs."[14]

The EEG is abnormal in about 50% of children studied for hyperkinetic behavior disorders. In one study, 45 of 106 children had "slight to moderate" change, and 8 had abnormal tracings.[15] There is no EEG change pathognomonic of behavior abnormality; one group suggests the indications for obtaining an EEG are: (1) paroxysmal behavior abnormalities, (2) history suggesting seizure disorders, and (3) history suggesting progressive global or focal neurologic dysfunction.[16] Because of the nonspecific nature of the information obtained and the expense incurred, an EEG is not recommended as part of the routine evaluation of hyperkinetic behavior disorder.

As with the EEG and "soft" signs, there are no pathognomonic psychologic characteristics of MCD. Wender feels that "there is no correlation between performance on routinely administered psychologic measures and the behavioral or neurologic attributes of the syndrome; . . . furthermore, there is no evidence that performance on such tests predicts response to drug or other therapy."[17] Intelligence and achievement measurements are helpful in determining the need for appropriate educational placement and in ruling out mental retardation. Conners has made recommendations for psychologic evaluation of such children.[18] Easily administered screening tests include the Draw-A-Man test, which provides a general estimate of intelligence independent of language function, and the Bender-Gestalt Visual Motor test, which requires perceptual organization. The physician should know what information he needs, whether diagnostic or therapeutic, prior to consulting a psychologist.

Treatment. Management of the hyperkinetic behavior disorder has three facets: (1) psychologic intervention and education of the family, (2) specific educational assistance, and (3) drug therapy. The first implies educating the parents regarding the nature of their child's problem, making recommendations for management in reference to discipline and environmental structure, and providing detailed information regarding medication, if necessary. Remedial education is required in children who have learning problems related to hyperkinesis; the physician should assist in this placement.

Drugs may be useful in the symptomatic treatment of behavioral abnormalities and are employed to control negative symptoms and enhance the learning process. The indications for treatment are academic, discipline, or family problems which result from this behavioral abnormality. The stimulants, amphetamines and methylphenidate, are the drugs of first choice. Several studies have demonstrated that

50% to 80% of children with MCD treated properly with stimulants will respond favorably.[1,19] These drugs work by increasing attention span and decreasing impulsivity, by focusing the quality of motor activity while not decreasing the quantity.[20] There are no known methods of predicting response to these drugs, and there is no scientific preference for either stimulant. The practical advantages of the amphetamines are that they are cheaper in the generic form and they are available in long-acting form, making once-a-day dosage possible. However, the side effects of methylphenidate are somewhat fewer. Some children who fail to respond to stimulants may respond to a phenothiazine. This class of drugs succeeds in altering behavior in a majority of patients, but their effects are not as constant and there are more side effects.[21] Although hyperactivity is diminished, other behavior difficulties such as decreased attention span and distractibility are not affected.[22] One study concluded that learning ability may be diminished with phenothiazines.[23] Other drugs are sometimes recommended, but none have specific indications or advantages. Behavioral and educational management programs have been suggested as alternatives to pharmacologic approaches.[24]

Follow-up. Conners said, "in the absence of definitive guidelines for patient selection, drug selection, and indications for drug use, a conservative therapeutic strategy indicates that one should use psychotropic drugs only under careful medical management, with appropriate follow-up of treatment which should involve the family and school . . ."[25] What is "appropriate" for follow-up? There is little evidence to support the necessity of repeated physical examinations, and this may be a waste of physicians' effort. There is likewise little evidence to suggest an improvement of "soft" neurologic signs with treatment. On the other hand, objective measures are needed for detecting changes in cognition, impulsiveness, and motor control. Conners demonstrated significant treatment effects with stimulants by means of WISC full scale IQ, Bender-Gestalt, Draw-A-Man, and other psychological tests.[26] Standard brief tests such as Draw-A-Man, Bender-Gestalt, and copying design are recommended both as a useful monitor of intellectual function, and as a means of evaluating ability to cooperate and control impulses.[25]

The family's history concerning response to treatment is of critical importance, and a parent questionnaire was developed and analyzed for this purpose.[27] Parents' observations have to be judged carefully in relation to their own needs and expectations, and in terms of the symptoms being treated. Sprague warns that "parents may not be a reliable source of information as to the effects of psychotropic drugs on the behavior of children."[28] Parents do not observe children in the highly structured environment of the classroom, which stresses attention span and motor control and which may not be present in the more loosely structured environment of home.

Another valuable source of information to ascertain response to treatment is the teacher. Several teacher questionnaire rating scales are described in the literature.[29-31] The most commonly employed is the Conners Abbreviated Teacher Rating Scale,[32] which has been analyzed and shown to be useful in the follow-up of medicated children.[33] Sprague recommends that the physician utilize the Conners Abbreviated Teacher Rating Scale on a monthly basis as long as the child is taking psychotropic medication and in school.

Speculation Regarding Results

This study has attempted to detail the management of children referred for hyperkinesis in a university general pediatric clinic. This retrospective information is, of course, "qualified" since there is no way to guarantee that all the information gathered by the evaluating physician was recorded in the chart. The data suggest that management, particularly the diagnostic evaluation and follow-up, does not closely approximate the management plan derived from the literature.

One can only speculate as to the possible causes of this difference. One of the major problems is the demand on time of personnel in the clinic; this is not unlike the offices of practitioners who are likely to encounter similar difficulties. This could be alleviated by decreasing the number of physical examinations, and by utilizing pre-completed historical questionnaires for such patients. Another problem may be lack of familiarity with psychologic testing materials and results; this problem likewise may be encountered by practitioners. Most school districts employ psychologists and other workers skilled in such testing who may be a valuable resource for the child's physician. Another problem specific to the clinic is the high turnover in health care personnel; in this respect the practitioner is at an advantage for following his patients and providing them optimum care.

Only 0.7% of all GISD elementary school children were taking medication at school. This agrees with the findings of Krager and Safer,[34] and adds evidence to reject estimates that 5-10% of all children are receiving stimulants, as is suggested in lay literature.[35] This low percentage may reflect poor case finding (not likely in light of public awareness of this problem) or perhaps a conservative approach in this locale in the use of psychotropic drugs.

Recommendations

The chart study and literature review offer some insight into the difficulties of following hyperkinetic children in a general pediatric clinic. The following recommendations are made specifically for such a clinic, but may also pertain to practitioners who follow this problem in their offices.

1. Each child should be followed by one primary physician familiar with the details of the hyperkinetic syndrome. Nurse practitioners, psychologists, social workers, and other professional personnel should be utilized as needed. Most school districts employ such personnel and should provide a readily accessible form of consultation in the community.

2. There should be specific guidelines for the diagnostic evaluation such as those recommended by Clements,[4] or those summarized in this article. Emphasis should be placed on historical detail rather than physical findings particularly in reference to past history, to social history, and to areas of disturbed function of the MCD syndrome such as distractibility, impulsivity, and short attention span. Associated physical disease should be ruled out. Bender-Gestalt and Draw-A-Man tests are easily administered psychologic screening evaluations and are helpful in assessment. EEG is not indicated unless a seizure disorder is suspected.

3. There should be specific guidelines regarding treatment. Whether to medicate should be given individual consideration, but only for school learning problems or discipline problems refractory to other methods. The cerebral stimulants (amphetamines and methylphenidates) are the

drugs of choice, followed by the phenothiazines. There are inadequate data to support the use of other drugs. Parental guidance and special school placement should be considered in all cases.

4. There should be specific guidelines for follow-up. There should be a follow-up at least every three months while a child is taking psychotropic medication. Historical information should be detailed both from parents and teachers. Objective measures for detecting changes in cognition and educational achievement should be performed periodically. Consideration should be given to the use of nurse practitioners, in the school and in the practitioner's office, for shorter interval follow-up visits.

References

1. Report of Conference on Use of Stimulant Drugs in Treatment of Behaviorally Disturbed Young School Children. J Learn Disab 4:523, 1971.

2. Rie HE: Hyperactivity in children. Amer J Dis Child 129:783-789, 1975.

3. Werry JS, Sprague RL: Hyperactivity, in Costello CG, Ed: Symptoms of psychopathology. New York, John Wiley & Sons, 1970, p 397.

4. Clements SD: Minimal brain dysfunction in children. Washington, US Dept of HEW, 1966.

5. Chalfant JC, Scheffelin MA: Central processing dysfunction in children: a review of research. Monograph. National Institute of Neurologic Disease and Blindness, 1969, p 148.

6. Kenny TJ, Clemmens RL: Behavioral pediatrics and child development. Baltimore, Williams & Wilkins Co, 1975, p 54.

7. Schain RJ: Minimal brain dysfunction: Curr Probl Pediatr (Aug) 1975, p 24.

8. Wender PH: Minimal brain dysfunction in children, diagnosis and management. Pediatr Clin North Am 20:187-202, 1973.

9. Rogers ME, Lilienfeld AM, Pasamanik B: Prenatal and paranatal factors in the development of childhood behavior disorders. Acta Psychiatrice et Neurologica Scand, Suppl 102, 1955, pp 1-157.

10. Laufer MW, Denhoff E, Solomons G: Hyperkinetic impulse disorder in children's behavior problems. Psychosom Med 19:38-49, 1957.

11. Kenny TJ, Clemmens RL, et al: Characteristics of children referred because of hyperactivity. J Pediatr 79:618-622, 1971.

12. Kenny TJ, Clemmens RL: Medical and psychological correlates in children with learning disabilities. J Pediatr 78:273-277, 1971.

13. Kennard MA: Value of equivocal signs in neurologic diagnosis. Neurology 10:753-764, 1960.

14. Adams RM, Kocsis JJ, Estes RE: Soft neurological signs in learning disabled children and controls. Am J Dis Child 128:614-618, 1974.

15. Capute AJ, Neidermeyer EL, Richardson F: The electroencephalogram in children with minimal cerebral dysfunction. Pediatrics 41:1104-1114, 1968.

16. Minimal brain dysfunction national project on learning disabilities in children. Phase II US Dept HEW, 1969, p 57.

17. Wender PH: Minimal brain dysfunction in children. Wiley Intersciences, 1971.

18. Conners CK: The syndrome of minimal brain dysfunction: psychological aspects. Pediatr Clin North Am 14 (4):749-766, 1967.

19. Steinberg GG, Troshinsky C, Steinberg HR: Dextroamphetamine-responsive behavior disorder in school children. Am J Psychiatry 128:174-179, 1971.

20. Millichap JG, Boldrey EE: Studies in hyperkinetic behavior II: laboratory and clinical evaluations of drug treatments. Neurology 17:467-471, 1967.

21. Millichap JG, Fowler GW: Treatment of "minimal brain dysfunction" syndromes, selection of drugs for children with hyperactivity and learning disabilities. Pediatr Clin North Am 14(4):767-777, 1967.

22. Erenberg G: Drug therapy in minimal brain dysfunction: a commentary. J Pediatr 81:359-365, 1972.

23. Sprague RL, Barnes KR, Werry JS: Methylphenidate and thioridazine: learning, reaction time, activity, and classroom behavior in disturbed children. Am J Orthopsychiatry 40:615-628, 1970.

24. Silver LB: Acceptable and controversial approaches to treating the child with learning disabilities. Pediatrics 55:406-415, 1975.

25. Conners CK: Drugs in the management of children with learning disabilities, in Tarnapol L, Ed: Learning disorders in children: diagnosis, medication, and education. Boston, Little Brown & Co. 1971.

26. Conners CK: Psychological effects of stimulant drugs in children with minimal brain dysfunction. Pediatrics 49:702-708, 1972.

27. Conners CK: Symptom patterns in hyperkinetic, neurotic, and normal children. Child Dev 41:667, 1970.

28. Sprague RL, Sleator EK: Effects of psychopharmacologic agents on learning disorders. Pediatr Clin North Am 20(3):719-735, 1973.

29. Conners CK: A teacher rating scale for use in drug studies with children. Am J Psychiatry 126:884-888, 1969.

30. Davids A: An objective instrument for assessing hyperkinesis in children. J Learn Disabil 4:499, 1971.

31. Werry JS: Developmental hyperactivity. Pediatr Clin North Am 15(3):581-599, 1968.

32. Conners CK, Taylor E, et al: Magnesium pemoline and dextroamphetamine: a controlled study in children with minimal brain dysfunction. Psychopharmacologica 26:321-336, 1972.

33. Kupietz S, Bialer I, Winsberg BG: A behavior rating scale for assessing improvement in behaviorally deviant children: a preliminary investigation. Am J Psychiatry 128:1432-1436, 1972.

34. Krager JM, Safer DJ: Type and prevalence of medication used in the treatment of hyperactive children. N Engl J Med 291:1118-1120, 1974.

35. Rogers J: Drug abuse—just what the doctor ordered. Psychology Today 5(4):16-24, 1971.

Dr. Casey, The Robert Wood Johnson Clinic Scholars Program, The University of North Carolina at Chapel Hill, School of Medicine, Division of Health Affairs, 207-H, Chapel Hill, NC 27514.

Drs. P. R. Nader and C. W. Daeschner provided guidance and assistance.

"If you're really minding your own business, you're giving more to higher education."

John T. Connor
Chairman and Chief Executive Officer
Allied Chemical Corporation

Make America smarter. Give to the college of your choice.

CFAE Council for Financial Aid to Education, Inc.
680 Fifth Avenue, New York, N.Y. 10019

Ad Council A Public Service of This Magazine & The Advertising Council

Bank Financing for Physicians

We specialize in equipment leasing and financing, unsecured loans and lines of credit to Physicians And we handle it all by mail.

Unsecured loans with optional dollar amounts (to $10,000), optional payment schedules. Equipment leasing to give you tax advantages, restore operating capital, convert unused depreciation to cash. And lines of credit to provide for future cash needs.

We charge tax deductible bank rates. You won't spend any of your valuable time at your bank, and you'll reserve your regular bank credit for times when you really need it.

For further information, complete and mail this coupon today. I want to know more about:

__ Unsecured Loans __ Sale & Lease Back Plans
__ A Line of Credit __ Lease-Purchase Plans
__ Equipment Leasing __ Equipment Financing
__ Other: _____

Dr. _____ Phone _____
Address _____
City _____ State _____ Zip _____

Professional Services Division
TEXAS BANK AND TRUST COMPANY
P. O. Box 101 Jacksonville, Texas 75766

BRIEF SUMMARY OF
PRESCRIBING INFORMATION

ANTIMINTH® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

When you're good people recognize you.

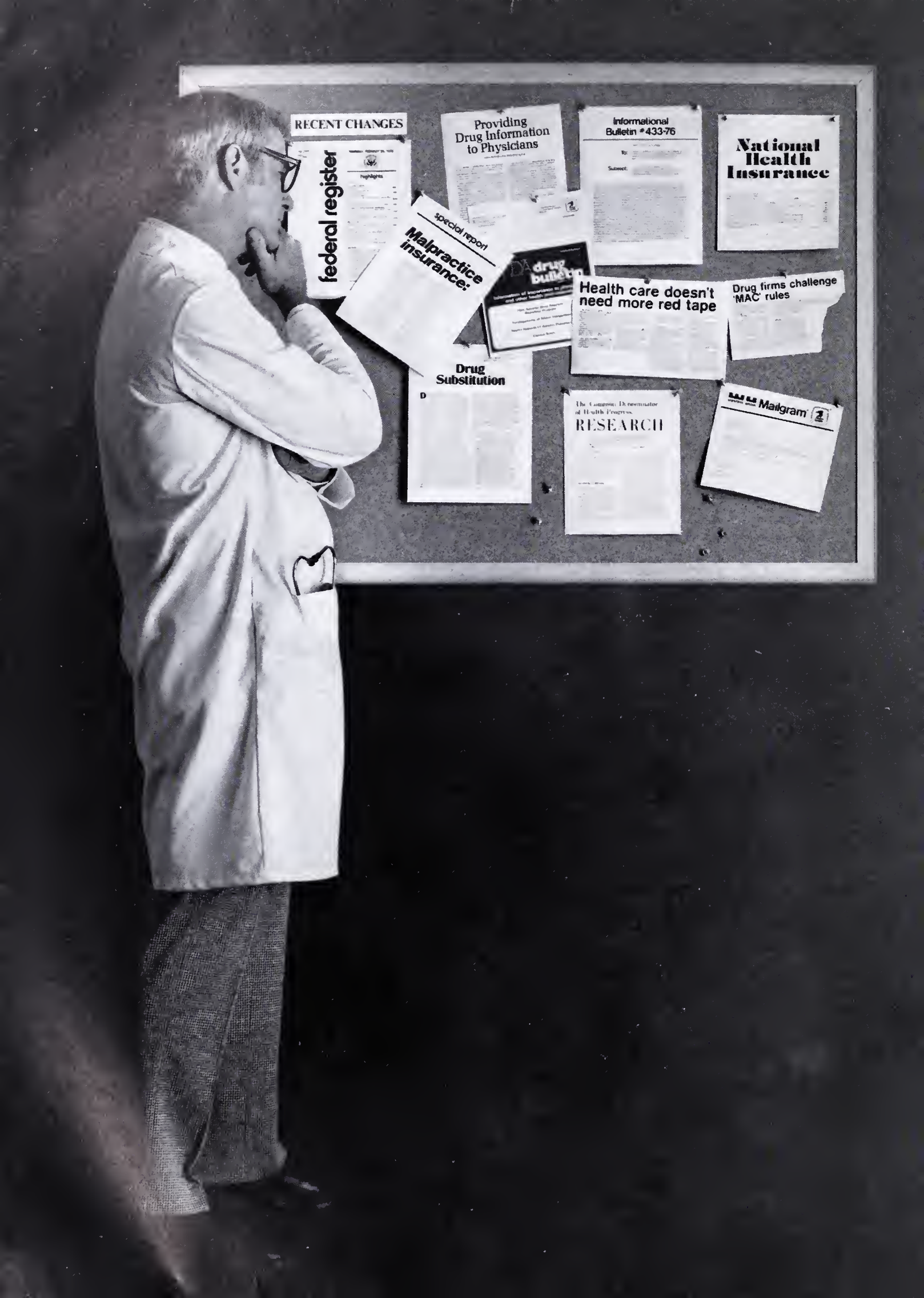
Highly effective
Single-dose convenience
Non-staining
Economical
Pleasant tasting

Antiminth®
(pyrantel pamoate)
equivalent to 50 mg pyrantel/ml
ORAL SUSPENSION

a drug of choice in pinworm infections

Please see brief summary of prescribing information on facing page.

©1977 LONE RANGER T.V., INC.


RECENT CHANGES
federal register
Providing Drug Information to Physicians
Informational Bulletin #433-76
National Health Insurance
special report
Malpractice insurance:
drug bulletin
Health care doesn't need more red tape
Drug firms challenge 'MAC' rules
Drug Substitution
RESEARCH
Mailgram

THERE ARE A LOT OF PEOPLE GETTING BETWEEN YOU AND YOUR PATIENT.

Medicine today is in the spotlight, subjected to all kinds of scrutiny. Your control over patient therapy is being monitored, judged and occasionally abrogated, sometimes by unknown third parties.

The worry is that in the wake of this focus, the relationship between you and your patient will be weakened, without offsetting benefits. Consider three examples:

Drug substitution In most states, pharmacy laws, regulations or professional custom stipulate that your non-generic prescriptions be filled with the precise products you prescribe. But in the last five years, a dozen or more State laws have been changed, permitting the pharmacist in most cases to select a product of the same generic drug to fill any prescription.

Ironically, this dilution of physician control has taken place against a background of growing evidence that purportedly equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA itself says it has not enforced the same standards for hundreds of "follow-on" products that it had applied to the original NDA approvals. Thus physician control over patient therapy is being eroded with a risk that patients may be exposed to drugs of uncertain quality.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant savings has been produced.

MAC Maximum Allowable Cost, MAC for short, is a Federal regulation designed to cut the Government's drug bill by setting price ceilings for drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the Government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right. Practicing doctors will have little to say about administration of the program, since Government will have absolute authority to make its choices stick.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to your patients: The cost of the research is more than ten times what it was, per product, in 1962; and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present approval process contributes to needless delay of needed therapy. That's why the increased efficiency of the drug approval process is vital to all our futures.

If these issues concern you, we suggest that you make your voice heard—among your colleagues and your representatives in State legislatures and in Washington.

It could make a difference in your practice tomorrow.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

Information for authors

Texas Medicine is a scientific, clinical journal published primarily for members of the Texas Medical Association. In addition, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, coming meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Scientific Articles
Manuscripts should be typed double-spaced with ample margins on firm paper. Two copies should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

References
Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrative Material
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously Published Material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with the manuscript.

Editorials
Editorials should be prepared in the same general manner, and should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the Managing Editor and consultants.

News
News items should be sent to the Editorial Offices, 1801 North Lamar Blvd., Austin 78701.

Continuing Education, Meetings
Continuing education courses and medical meetings are listed in each issue. Information about courses should include title, sponsor, location, dates, duration, fee, how many may enroll, for whom the course is designed, teaching methods, type and number of hours credit, and name and mailing address of a person to contact.

Information about meetings should include the name of the organization, place and inclusive dates, and name and mailing address of a person to contact. Program topics and names of speakers may be included as space permits.

Material should be submitted in writing six weeks before publication; for example, information for the June issue (published June 1) is needed by April 15.

Obituaries
Obituaries of deceased TMA members are published if adequate information is received within four months of date of death. When notifying the editors of a member's death, please give the name and address of next of kin.

Policy on Columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Scientific Publication Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the Committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the Managing Editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

Help for those with medical acronym aphasia

AAMC ABIM ABMS ACS ADA
AFPD AHA AHA AHEC AIP AM
APG APHA BHI BHM BHP BHI
BMS BNDD BQA CAT CBO CI
CCME CDC CHAMP CHAMPU
CHP CME CME CMSS COG C
COTRANS CPHA CPT DHEW
DHMO DME DOJ EAC ECFMC
EMCRO EMS ERDA ETS FAH
FDA FLEX FMG FSMB GAO H
HIAA HMEIA HMO HRA HRG H
HSA HSMHA HSP HUP JCAH
LCGME LCME LOS MA MAC I
MCAT MCE MECO MERC MEI

AAMC Association of American Medical Colleges interested in the advancement of medical education

ABIM American Board of Internal Medicine certification board to determine the qualifications of, administer examinations to, and certify as specialists in internal medicine those doctors of medicine meeting its standards

ABMS American Board of Medical Specialties actively concerned with the establishment, maintenance, and elevation of standards for the education and qualification of physicians recognized as specialists through the certification procedures of its member specialty boards

ACS American Cancer Society supports education and research in cancer prevention, diagnosis, detection and treatment, and provides special services to cancer patients

ADA American Diabetes Association to promote among physicians and others the free exchange of knowledge with respect to diabetes mellitus; to improve standards of treatment; to promote medical research by individuals, hospitals, clinics, universities, and other institutions

AHA American Heart Association to support research, education and community service programs with the objective of reducing death and disability for heart and blood vessel diseases; to coordinate the efforts of physicians, nurses, social workers, and others engaged in the fight against heart and circulatory disease

AHA American Hospital Association carries out research and education projects in such areas as health care administration, hospital economics, hospital facilities and design, community relations; represents hospitals as national spokesman for legislation

AIP Annual Implementation Plan the annual implementation plan under PL 93-641

AMA American Medical Association provides information on drugs, therapy and research, foods and nutrition, physical medicine, cosmetics and medical quackery, keeps members informed on significant medical and health legislation on state and national levels, and represents profession with Congress and governmental agencies, cooperates in setting standards for medical schools and hospital intern and residency training programs, offers physicians placement service and counseling on practice management problems

APHA American Public Health Association services include promulgation of standards, establishment of uniform practices and procedures, development of the etiology of communicable diseases, creation of testing methods for selection of professional public health workers, establishment of desirable minimum educational qualifications, sponsoring accreditation of schools of public health and graduate programs for community health educators, research in many areas of public health

ADAMHA Alcohol, Drug Abuse, and Mental Health Administration conducts and supports research on the biological, psychological, sociological, and epidemiological aspects of alcoholism, drug abuse, and mental health and illness; develops standards and regulation for assuring the quality of alcoholism, drug abuse, and mental health services; provides assistance to regional, state, and local Professional Standards Review Organizations in cooperation with appropriate Public Health Service organization components

BHM, BHP Bureau of Health Manpower of HEW plans, develops, and administers programs in planning, coordinating, evaluating, and supporting the development and utilization of the nation's health manpower; programs are designed to strengthen state and local health manpower capacities and to develop new approaches to health manpower development and use

BHP Bureau of Health Planning, HEW provides leadership and administration of a program of federal, state, and areawide health planning and health delivery systems, development through grants, contracts, loans, and loan guarantees

BMS Bureau of Medical Services of HEW programs to provide comprehensive medical care for designated federal beneficiaries, occupational health care and safety services for federal employees; assist in the safety services for federal employees; and assist in the development, improvement, expansion, and integration of emergency medical services systems; also fosters the development of organized system of prepaid health care to voluntarily enrolled populations through its Health Maintenance Organization program

BQA Bureau of Quality Assurance, HEW works to assure that health care services provided under the Medicare, Medicaid, and other federal programs are medically necessary and furnished in the most economical manner consistent with recognized professional standards of care; serves as the national focus for assuring accountability to health care consumers for the quality of health care services; responsibility for formulation of policy recommendation in areas of provider standards, utilization review, Professional Standards Review Organizations, and quality assurance

C

CAT SCANS Computerized axial tomography scanners produces cross-sectional images of the human body, in planes perpendicular to the body's axis, making tens of thousands of x-ray exposures through the body at the desired slice level

CBO Congressional Budget Office provides Congress with basic budget data and with analyses of alternative fiscal, budgetary, and programmatic policy issues; responsibility for economic forecasting and fiscal policy analysis, cost projections, annual report on the budget, and special studies

CCME Coordinating Council on Medical Education supervises and coordinates the activities of the existing Liaison Committee on Medical education, the new Liaison Committee on Graduate Medical Education and such other Liaison Committees related to medical education as deemed mutually agreeable and advisable by the five parent organizations and the CCME

CDC Center for Disease Control federal agency charged with protecting the public health of the nation by providing leadership and direction in the prevention and control of diseases and other preventable conditions; adminsters national programs for the prevention and control of communicable and vector-borne diseases and other preventable conditions, including the control of childhood lead-based paint poisoning and urban rat control

CME Council on Medical Education, AMA accredits and provides consultation to continuing medical education programs, graduate, medical educational programs, and educational programs for allied medical occupations

CMSS, AMA Council on Medical Specialty Societies council of the American Medical Association whose members represent specialty societies

COG Council of Governments planning bodies established by the Comprehensive Health Planning Law of 1967

COTRANS Coordinated Transfer Application System, AAMC in this program, sponsored by the Association of American Medical Colleges, a student transfers from a foreign medical school to a US medical school at the third year level

CPHA Commission on Professional and Hospital Activities nonprofit organization providing assistance to hospitals

D

DHEW Department of Health, Education & Welfare, US Government involves Social Security Administration, American education, health services, public affairs, health, human development, legislation, planning, and evaluation

DOJ Department of Justice, US through its thousands of lawyers, investigators, and agents the department plays the key role in protection against criminals and subversion in ensuing health competition of business in safeguarding the consumer and in enforcing drug, immigration and naturilization laws

DPW Texas Department of Public Welfare the state agency administering the Medicaid program

E

ECFMG Educational Commission for Foreign Medical Graduates formed to enable foreign medical graduates to qualify themselves before they come to the United States, to help them in choosing appro-

priate internships or residencies; distributes to foreign medical graduates around the world information about United States conditions and requirements in areas of medicine

EMCRO Experimental Mutual Care Review Organizations a pilot or test program on peer review conducted by the Department of Health, Education, and Welfare prior to the passage of the PSRO program

ERDA Energy Research & Development Administration to reorganize and consolidate federal activities relating to research and development of the various sources of energy; to develop and increase the efficiency and reliability of the use of all energy sources to meet the needs of present and future generations, to increase productivity of the national economy and strengthen its position in regard to international trade.

ETS Educational Testing Service provides tests and related services for schools, colleges, governmental agencies and professionals, offers advisory services in the sound application of measurement techniques and materials, conducts education and measurement research

F

FAH Federation of American Hospitals members include privately owned or proprietary (for profit) hospitals

FDA Food & Drug Administration federal agency that protects the health of the nation against impure and unsafe foods, drugs and cosmetics, and other potential hazards

FMG Foreign Medical Graduate graduate of a school of medicine not located in the United States

FSMB Federation of State Medical Boards of the US, Inc composed of state medical examining and licensing boards

G

GAO General Accounting Office of the US Government to assist Congress and its commitees in carrying out their legislative and oversight responsibilities, to carry out legal accounting, auditing, and claims settlement functions with respect to the federal government programs and operations as assigned by the Congress

GSTCBC Greater South Texas Cultural Basin Commission state commission organized to help provide developing services for the Greater South Texas Cultural Basin

H

HEW US Dept of Health, Education & Welfare involves Social Security administration, education, health services, human development, legislation

HIAA Health Insurance Association of America to promote development of voluntary insurance against loss of income and financial burdens resulting from accident and sickness

HMO Health Maintenance Organization organization to provide pre-paid health services

HPR Health Planning Regions were established by the Comprehensive Health Planning Act of 1967; now defunct with functions assumed by the Health Systems Agencies of PL 93-641

HRG Health Research Group of Ralph Nader research study group directed by Ralph Nader

HSA Health Services Administration of HEW mission is to provide professional leadership in the delivery of health services, major components include the Bureau of Community Health Services, the Bureau of Quality Assurance, the Indian Health Service, and the Bureau of Medical Services

HSA Health Systems Agency of PL 93-641 twelve local agencies designated in Texas

J

JCAH Joint Commission on Accreditation of Hospitals a commission established by the American College of Physicians, American College of Surgeons, American Hospital Association, and the American Medical Association to establish and maintain standards for hospitals, long term care facilities, facilities for the mentally retarded, and psychiatric facilities, conducts survey and accreditation programs

L

LCGME Liaison Committee on Graduate Medical Education accrediting body for graduate medical education programs

LCME Liaison Committee on Medical Education accrediting body for medical schools

M

MADOC Medical Analysis of Days of Care modified versions of Hill-Burton hospital service areas; areas contain from 5 to 50 hospitals and a minimum of 1,000 beds; areas reflect information about patient origin, common patterns of medical care, and the number and type of medical facilities

MCAT Medical College Admission Test nationally standardized test administered and scored by the American College Testing Program required or strongly recommended by almost all US medical schools

MECO Medical Education Community Orientation summer program to provide medical orientation in hospitals for students

MH/MR Texas Department of Mental Health & Mental Retardation provides services including vocational training and evaluation, counseling for patients and their families, day programs, recreation programs, and inpatient care

MSA Medical Services Administration of the SRS administers through grants to states, programs that provide medical services to the needy and the medically needy

N

NAS National Academy of Sciences an organization of distinguished scientists and engineers dedicated to furthering of science; investigates, examines, experiments, and reports on any subject of science when requested by the federal government

NBME National Board of Medical Examiners to assist medical schools, state boards of examiners, medical specialty boards and other medical institutions in the development of examinations and in evaluation of the effectiveness of their educational programs

NCDC National Center for Disease Control administers national programs for the prevention and control of communicable and vector-borne diseases and other preventable conditions, provides consultation to other nations about the control of preventable diseases

NCHSR National Center for Health Services Research of HEW plans, develops, and administers a program of health services research, demonstration, evaluation and research training, makes grants and contracts to health service providers

NCI National Cancer Institute developing a National Cancer Program to expand existing scientific knowledge on cancer causes and prevention and on the diagnosis, treatment, and rehabilitation of cancer patients

NEI National Eye Institute conducts and supports fundamental studies on the eye and visual system, and on the causes, prevention, diagnosis, and treatment of visual disorders

NHBLI National Heart Blood & Lung Institute performs reasearch grant, contract, and awards programs in the areas of cardiovascular, pulmonary, and blood disease and blood resources

NHPIC National Health Planning Information Center of HEW Room 1234, 5600 Fishers Lane, Rockville, MD 20852, phone (301) 443-5010

NIAID National Institute of Allergy & Infectious Diseases conducts and supports broadly based research and research training on the causes, characteristics, prevention, control, and treatment of a wide variety of disease believed to be caused by infectious agents, including bacteria, viruses, and parasites

NIAMD National Institute of Arthritis & Metabolic Diseases conducts and supports research on the causes, diagnosis, treatment, and prevention of numerous diseases and disorders including arthritis, orthopedics and skin disease, diabetes, endocrinology and metabolic disease, digestive disease and nutrition, kidney and urologic disease and blood diseases

NIH National Institutes of Health organized to improve the health of the American people; conducts and supports biomedical research into the causes, prevention, and cure of disease; supports research training and the development of research resources; makes use of modern methods to communicate biomedical information

NIMH National Institute of Mental Health provides leadership, policies, and goals for the federal effort in the promotion of mental health, the prevention and treatment of mental illness, and the rehabilitation of affected individuals

NLM National Library of Medicine serves as the nation's chief medical information source, authorized to provide medical library services and on-line bibliographic searching capabilities, such as MEDLINE and TOXLINE to public and private agencies and organizations, institutions, and individuals

NLRB National Labor Relations Board administers the nation's laws relating to labor relations, vested with the power to investigate and settle labor disputes, safeguard employee's rights to organize, and prevents unfair labor practices

NMA National Medical Association professional society of Black physicians, has 17 sections representing major specialties of medicine

NRC National Research Council of National Academy of Sciences stimulates scientific research and fosters the application of research findings to engineering, agriculture, medicine, and other useful arts, with the object of increasing knowledge and contributing in other ways to public welfare

O

O OF E Office of Education—HEW administration of programs of financial assistance to education agencies, institutions, and organizations; provides professional and financial assistance to strengthen education in accordance with federal laws and regulations

OASH Office of Assistant Secretary of Health of the Department of Health, Education, and Welfare

OEO Office of Economic Opportunity sets up programs for achieving the opportunity for education and training, the opportunity to work, and the opportunity to live in decency and dignity

OHD Office of Human Development established to help special groups of people develop their fullest human potential, comprised of 13 agencies and offices

OMB Office of Management & Budget aids the President in more efficient and economical conduct of government service, assists in developing an effective coordinating mechanism to implement government activities and to expand interagency cooperation, assists the President in the preparation of the budget

OPSR Office of Professional Standards in DHEW the federal office in the Department of Health, Education and Welfare responsible for managing the PSRO program

OS Office of the Secretary the Secretary of Health, Education and Welfare supervises and directs the activities of the department

P

PA Physician's Assistant a person who is a graduate of a Physician's Assistant training program approved by the Council on Medical Education of the AMA or a person who has passed the examination given by the National Commission on the Certification of Physician's Assistants

PEP Performance Evaluation Procedures (for auditing and improving patient care) JCAH

PHS Public Health Service responsibilities include compiling vital statistics, health services for the American Indians and Alaska natives, expanding grants to states for health services, financial assistance to health professions educational institutions

PNHSA Physicians National House Staff Association national association of house staff members

PSRO Professional Standard Review Organization purpose is to review institutional care for the quality of service, the medical necessity of care, and if care was rendered in the appropriate level institution

S

SMFP State Medical Facilities Plan (PL 93-641) medical facilities plan under PL 93-641

SRS Social & Rehabilitation Services of HEW administers federal programs that provide technical, consultative, and financial support to states, communities, and organizations in the provision of services to the aged, children and youth, the disabled, and families in need

SSA Social Security Administration administers a national program of contributory social insurance

T

TARP Texas Admissions and Review Program a medical peer review program of institutional admissions and institutional medical care; one of the socioeconomic programs of the Texas Medical Foundation

TDHR Texas Department of Health Resources responsible for a wide variety of programs aimed at protecting and promoting health of the people of Texas

TDMH/MR Texas Department of Mental Health and Mental Retardation provides services including vocational training and evaluation, counseling for patients and their families, day programs, recreation programs, and inpatient care

TDPW Texas Department of Public Welfare operates the Medicaid Program, offers programs of social services to families and children

and to aged and disabled, administers state level distribution of US Department of Agriculture food stamps and administers other financial assistance programs

THFC Texas Health Facilities Commission state agency for admistering the Texas Certificate of Need program, regulating the addition or remodeling of hospitals and other health care institutions or added services (in excess of $100,000)

TIMA Texas Institute for Medical Assessment a nonprofit corporation organized to perform the PSRO functions in Texas

TMA Texas Medical Association a nonprofit corporation, the professional association for Texas doctors of medicine

TMF Texas Medical Foundation nonprofit corporation of doctors of medicine and doctors of osteopathy; to develop and administer socioeconomic programs of assistance to physicians

TRC Texas Rehabilitation Commission provides rehabilitation of handicapped and disabled individuals, provides for construction of rehabilitation facilities and workshops

TWQB Texas Water Quality Board provides for control of the quality of waters in the state, responsible for establishing criteria governing the discharge of waste water into or adjacent to waters of the state, conducts planning and research

USMG United States Medical Graduate graduate of a medical school in the United States

WHO World Health Organization universal organization that provides health services

WIN Work Incentive Programs of the Texas Department of Public Welfare

Scientist uses citation indexing to predict winners of the Nobel Prize

Twenty-five to fifty percent of all published scientific papers are not cited by another author—ever. With so many articles condemned to oblivion, perhaps the academic adage "publish or perish" should be changed to "citations mean salvation."

Citation counting, rather than publication counting may be the most meaningful method of measuring scientific output, said Eugene Garfield, PhD, founder and president of the Institute for Scientific Information. Dr Garfield was the keynote speaker at The University of Texas Health Science Center in Dallas in March.

"The number of times a scientist publishes is not a measure of the impact of his work on the scientific community," Dr Garfield said. "At the Institute for Scientific Information we have found that impact, or at least the indication of impact, can be quantitatively measured by analyzing the information contained in bibliographic citations."

Dr Garfield explained that by comprehensively indexing every citation published in more than one thousand scientific journals and feeding that information into a computer, he can measure the performance of research scientists in terms of their scientific impact.

By using the 50 million citations that his institute has processed over the last 15 years, he can forecast who the future winners of the Nobel Prize will be "with a degree of certainty that Jimmy the Greek would bet on."

Prize winners almost invariably come from the "cream of the crop" who are in the top 1% of highly cited scientists, he said.

"There are more than one million trained scientists in the world. Out of those one million or more candidates, about 10,000 are cited at least 50 times per year. The fact is that almost all past Nobel Prize winners have regularly appeared on this list, Dr Garfield said.

"And as we narrow down the list to the top 2,500, we still get 90% of all Nobel Prize winners. In fact, over 75% of the winners are found in the super-elite group of the thousand most frequently cited scientists," he said.

Through citation networks (maps of when and where a particular article was cited by other researchers) it is possible to observe certain historical and sociological processes at work which are the implicit, if not the explicit, concern of Nobel selection committees, he said.

Of course, there are other factors one must consider in evaluating potential for a Nobel Prize, Dr Garfield said, including the length of time that has elapsed since the individual's most frequently cited paper, peer judgements, and the field in which the researcher works.

This last factor is important because the populations of papers in the different fields vary tremendously. "Biochemists and biologists are, on the average, much more prolific writers than physicists and mathematicians," Dr Garfield said. "And biologists may cite an average of 20 papers while mathematicians find that eight is enough. Thus, highly cited life scientists are more numerous."

Nobel winners do publish quite frequently, Dr Garfield said. "But Nobelists are not only prolific communicators, what

they publish is eventually and quite consistently cited over a long period of time. It is characteristic of Nobel Prize winners that one or more of their papers show up on a list of the most frequently cited papers.

"Unless the ground rules for the selection of winners change, it is inconceivable that any scientist could achieve the award unless he or she had published one or more landmark papers," he said.

Garfield said his system of citation indexing can be useful as a basis for making many grants and awards other than the Nobel Prize. "My main objective in all this work is to democratize the process by which scientists are selected for awards and particulary for membership in national academies. With this technique, when the politics of science are at work, all of the potential candidates in a field will be given proper evaluation."

Citation studies of various kinds have been going on for decades, he said, but in the last few years the field has grown dramatically.

Dr Garfield, who received his BS degree in chemistry and MS in library science from Columbia University and his PhD in structural linguistics from the University of Pennsylvania, said he is optimistic that citation indexing will be utilized increasingly in the future.

Eugene Garfield, PhD

THIS SPACE PROVIDED BY THE PUBLISHER AS A PUBLIC SERVICE.

She's a graduate of Columbia with a Masters in literature.

She's a vice president of a publishing company.

She's watched television programs and read dozens of pamphlets and articles about early cancer detection.

She has relatives and close, personal friends who have had mastectomies.

She's about as aware of the need for breast self-examination as any intelligent woman could be.

Yet she does not get regular checkups nor does she even examine her own breasts.

Why? Because her doctor never told her to.

But 92% of the women who receive personal instruction from their doctors *do* regularly practice BSE.*
You don't have to be told how important early detection is. But maybe you need this reminder that a few personal words from you can often mean more than the millions of words that go into publicity and television programs.

*Based on a Gallup study conducted for the American Cancer Society.

american cancer society®

Photo Ray Solowinski

BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT-OUTPATIENT
DEPARTMENT OF ADOLESCENT PSYCHIATRY

A Private 82 bed psychiatric hospital located in Oak Cliff on 18 acres amidst natural wooded surroundings. A multi-approach treatment center of neurologic and all psychiatric disorders. Treatment modalities include Somatic Therapy, Milieu Therapy, Chemotherapy, Individual and Group Therapy and Behavior Modification. Complete facilities for OT-RT under the direction of trained personnel. An individually directed program based on full diagnostic evaluation and actual performance administered by a staff skilled in special education and problems of the adolescent and young adult.

PSYCHIATRY

Jackson H. Speegle, M.D.
Fred H. Jordan, M.D.
Joseph H. Lindsay, M.D.
John T. Holbrook, M.D.

PSYCHOLOGY

George R. Mount, Ph.D.
Tom I. Payton, M.S.
Patrick R. Barnes, M.S.

DIRECTOR OF NURSES
Nita Ivey, R.N.

SOCIAL SERVICES
Beth Rutherford, M.S.W.

COURTESY STAFF

DIRECTOR OF EDUCATION
William E. Nix, Ph.D.

O.T. AND R.T. THERAPY
Director
Chequita Dian Badger, B.S.

1353 N. WESTMORELAND AVENUE, DALLAS, TEXAS 75211 **214 331-8331**

KELSEY-SEYBOLD CLINIC

TEXAS MEDICAL CENTER • 6624 FANNIN STREET • HOUSTON, TEXAS 77030 • AC (713) 797-1551

INTERNAL MEDICINE

Allergy
C. W. Ewing, M.D., F.A.C.A.

Arthritis and Rheumatic Diseases
J. W. Kemper, M.D., F.A.C.P.
M. S. Fischer, M.D.

Cardiology
E. F. Beard, M.D., F.A.C.P.
D. D. Goulden, M.D.
M. J. Mihalick, M.D.

Endocrine and Metabolic Diseases
M. P. Kelsey, M.D., F.A.C.P.
A. E. Leiser, M.D., F.A.C.P.
P. K. Champion, Jr., M.D., F.A.C.P.

Gastrointestinal Diseases, Endoscopy
J. R. Kelsey, Jr., M.D., F.A.C.P.
P. S. Bentlif, M.D., F.A.C.P.
R. D. Eichhorn, M.D., F.A.C.P.
F. S. O'Neil, M.D., F.A.C.P.
J. W. McBee, M.D., F.A.C.P.

General Internal Medicine
G. E. Burke, M.D.
C. F. Taboada, M.D., F.A.C.P.
N. H. Nauert, Jr., M.D.
G. G. Bourianoff, M.D.

Hematology
J. B. Bart, M.D., F.A.C.P.

Infectious Diseases
S. Riggs, M.D., F.A.C.P.

Nuclear Medicine
D. E. Mouton, M.D., F.A.C.N.M.

Oncology
E. N. Root, M.D.

Pulmonary Diseases, Bronchoscopy
S. P. Fischer, M.D., F.A.C.P.
B. D. Walker, M.D.

DERMATOLOGY

W. M. Fraser, M.D., F.A.A.D.
D. W. Owens, M.D., F.A.A.D.

GENERAL & THORACIC SURGERY

Surgical Endoscopy & Colonoscopy
W. D. Seybold, M.D., F.A.C.S.
J. D. McMurrey, M.D., F.A.C.S.
J. L. Doggett, M.D., F.A.C.S.
M. F. Appel, M.D., F.A.C.S.

NEUROLOGY

R. R. Pierce, M.D., F.A.A.N.
W. R. Seybold, M.D.

OBSTETRICS & GYNECOLOGY

M. L. Cody, M.D., F.A.C.S., F.A.C.O.G.
W. A. Johnson III, M.D., F.A.C.O.G.

OCCUPATIONAL & PREVENTIVE MEDICINE

M. B. Johnston, M.D., F.A.C.Pr.M.
H. B. Elwell, Jr., M.D.
R. M. Fenno, M.D., F.A.C.P.
F. A. Goss, M.D.
W. R. Hawkins, M.D., F.A.C.Pr.M.
W. R. Hein, M.D.
L. A. Herrmann, M.D.
G. F. Kelly, M.D., F.A.C.Pr.M.
J. Mackay, M.D.
C. A. Owen, M.D., F.A.C.S.
C. G. Petry, M.D.
B. W. Prior, M.D., F.A.C.Pr.M.
N. A. Tadros, M.D., F.A.C.Pr.M.
A. M. Wyss, M.D., F.A.C.Pr.M.

OPHTHALMOLOGY

H. E. Wahlen, M.D., D.A.B.O.
J. E. Key, II, M.D.

ORTHOPEDIC SURGERY

R. A. Fulford, M.D., F.R.C.S. (C)
T. H. Crouch, M.D., F.A.C.S.

OTOLARYNGOLOGY

J. C. Dickson, M.D., F.A.C.S.
J. L. Smith, M.D., F.A.C.S.
L. P. Conrad, M.D.

PATHOLOGY

R. A. Jordan, M.D., F.A.S.C.P.

PEDIATRICS

Rheumatology
E. J. Brewer, Jr., M.D., F.A.A.P.

Allergy and Pulmonary Diseases
C. W. Ewing, M.D., F.A.A.P.

Gastroenterology
G. D. Ferry, M.D., F.A.A.P.

General Pediatrics and Consultation
F. J. Boland, M.D., F.A.A.P.
R. M. Thaller, M.D., F.A.A.P.
K. C. Pinckard, M.D.

PSYCHIATRY

C. G. Cochran, M.D.
R. Daichman, M.D.

RADIOLOGY

R. J. Kurth, M.D., F.A.C.R.
E. G. Linares, M.D.
P. Raphael, M.D.

UROLOGY

D. W. Pranke, M.D., F.A.C.S.
F. M. Fry, M.D.

DENTISTRY

J. W. Orr, D.D.S.
D. L. McClung, D.D.S.

SPEECH PATHOLOGY & AUDIOLOGY

D. R. Fox, Ph.D.
J. W. Porter, M.A.
N. Shulak, M.A.

EXECUTIVE DIRECTOR

J. A. Bakken, F.A.C.M.G.A.

K-S WEST
1111 Augusta Drive
Houston, Texas 77057
(713) 780-1661

K-S DOWNTOWN
Two Houston Center, Suite P-310
909 Fannin Street, Houston, Texas
77002 (713) 654-4401

MEDICINE AND THE LAW

TEXAS ATTORNEY GENERAL UPHOLDS CONSTITUTIONALITY OF PROPOSED MEDICAL LIABILITY AND INSURANCE IMPROVEMENT ACT

SB 103 is among the many bills[1] introduced in the 65th Session of the Texas Legislature relating to the current medical professional liability insurance crisis. The bill was introduced by Sen Ray Farabee, Wichita Falls, and supported by the Texas Medical Association.

SB 103 would have implemented and built upon the recommendations of the Texas Medical Professional Liability Study Commission created by the 64th Legislature. Since SB 103 and other proposed legislation addressing this problem have the same or "generally equivalent" provisions,[2] a constitutional ruling on SB 103 has a bearing not only on that bill but also comparable concepts in other bills including HB 1048.

In April Texas Attorney General John Hill issued a formal opinion in favor of the constitutionality of all but two provisions of SB 103.[3] His opinion came in response to a request by the Senate Jurisprudence Committee asking 16 questions about the constitutionality *vel non* of SB 103.

All or part of 12 questions asked involved the contention that legislation like SB 103 constitutes special legislation in violation of Article 3, Section 56, of the Texas Constitution. In rejecting this constitutional challenge, the Attorney General's opinion states:

> "The major Texas case discussing the standard to be employed in determining whether a bill is a special law is *Clark v. Finley,* 54 S.W. 343 (Tex. 1899). There the Supreme Court said:
>
> > 'A law is not special because it does not apply to all persons or things alike. Indeed, most of our laws apply to some one or more classes of persons or of things and exclude all others. Such are laws as to the rights of infants, married women, corporations, carriers, etc. Indeed, it is perhaps the exception when a statute is found which applies to every persons or thing alike . . . 'Without entering at large upon the discussion of what is here meant by a 'local or special law,' it is sufficient to say that a statute which relates to persons or things as a class is a general law, while a statute which relates to particular persons or things of a class is special, and comes within the constitutional prohibition . . . To what class or classes of persons or things a statute would apply is, as a general rule, a legislative question . . .
>
> "More recently the Texas Supreme Court said that a statute which is challenged as a special law must be held constitutional if there is any basis for the classification which could have seemed reasonable to the Legislature . . .
>
> "We have carefully examined the classification in question and the legislative findings set out in section 1.02 of Senate Bill 103. Additionally, we have examined the Final Report of the Texas Medical Professional Liability Study Commission to the 65th Texas Legislature, the findings of which are adopted in the bill. While we are aware that courts in other states, although a minority, have invalidated malpractice legislation on similar grounds (citing various trial/appellate court cases from Illinois, Ohio, Idaho, Florida, Colorado, New York and Nebraska), we believe the strict nature of the test

requires us to conclude that challenges to the statutes based on the special law doctrine would not be successful. In light of these findings we cannot say that the classifications made by the bills are so unreasonable as to constitute special legislation."

The Attorney General's opinion also concludes that SB 103 probably would not be held by Texas courts to be unconstitutional under the equal protection clause of the Fourteenth Amendment to the United States constitution. The relevant standard there is whether the statutory classification has some "reasonable basis."

With respect to constitutionality of the controversial liability limits provision in SB 103, the Attorney General's opinion reasons:[2]

"... Thus, if the legislation is enacted the maximum recovery would be $500,000 plus medical and similar expenses. You have specifically asked if this limitation would constitute a special law or a violation of equal protection or due process. As we have already addressed the special law and equal protection concepts, we need discuss only the due process aspect of the question.

"The basic due process arguments which have been raised in challenges of medical malpractice legislation involve claims that there is a violation of 'substantive due process' and that common law rights cannot be abrogated without provision of a resulting *quid pro quo*. The standard adopted by the courts under the substantive due process concept is that the due process clause of the Constitution demands only that a law not be unreasonable, arbitrary or capricious and that the statutory means selected have a real and substantial relationship to the object sought to be obtained ... In light of the similarity between this standard and that discussed in relation to equal protection questions, we believe the same considerations we reviewed in regard to your equal protection questions would be relevant to this issue and that it is unlikely that the legislation would be found to be invalid as a matter of substantive due process."[4]

The two provisions of SB 103, as filed, that the Attorney General's opinion views as probably unconsitutional are that portion of the screening panel section which prohibits panel members whose findings are admissible at a subsequent trial from being called as witness,[5] and that part of the informed consent section which declared a patient's signature on the requisite form to constitute compliance as a matter of law.[6]

In sum, the fundamental framework of SB 103 is constitutionally sound according to the Texas Attorney General, whose opinion, while not binding, is entitled to due consideration. Thus, the Attorney General's opinion gave the 65th Legislature constitutional clearance to pass a comprehensive bill addressing the existent medical professional liability insurance crisis—whether it be labeled SB 103, HB 1048 or otherwise.

Will Barber and Ace Pickens
Brown, Maroney, Rose, Baker & Barber
TMA Legal Counsel

---

[1]Others include HB 1048 by Rep Tom Uher, Bay City, and Rep Don Henderson, Houston; HB 722-740 by Rep Bob Davis, Irving; SB 775 by Sen Jack Ogg, Houston.
[2]Albeit not therapeutically equivalent.
[3]Letter Advisory No. 135 (April 4, 1977); John L. Hill, Attorney General of Texas.
[4]The Attorney General opinion also rejects the contention that a statutory limitation of liability without a specific corresponding quid pro quo would be found to be unconstitutional.
[5]On grounds of violating constitutional rights to trial by jury.
[6]On grounds of denying constitutional rights to trial by jury of consent issue.

Medical Newsmakers

KENNETH D. GAVER, MD, commissioner of the Texas Department of Mental Health and Mental Retardation, has been elected chairman of the Accreditation Council of Psychiatric Hospitals, an adjunct of the Joint Commission on Accreditation of Hospitals. (JCAH) The council, organized in 1970, has established standards of certification for public and private mental hospitals and mental health programs.

JAMES F. ARENS, MD, professor and chairman of the department of anesthesiology, University of Mississippi Medical Center, Jackson, Miss, will be the new professor and chairman of the department of anesthesiology at The University of Texas Medical Branch in Galveston beginning July 1, 1977. Dr Arens is a certified diplomate of the National Board of Medical Examiners, the American Board of Anesthesiology, and the American College of Anesthesiology.

HOMER E. PRINCE, MD, Crockett, has been honored by the American Congress of Allergy and Immunology for his pioneering work in establishing a summer rehabilitation camp for a group of children suffering from bronchial asthma.

Baylor College of Medicine has selected L. S. (BUD) THOMPSON, JR, MD, past president of the Texas Medical Association, as its Distinguished Alumnus for 1977. He is a 1948 graduate of Baylor College of Medicine. He has also served as chairman of the TMA Public Health Committee, a member of the TMA Council on Medical Legisation, and as chairman of the Texas Political Action Committee.

ROBERT W. MCCONNELL, MD, Houston, has been awarded a Gold Medal, the highest honor of the American College of Radiology, for his distinguished achievements in medicine. Dr McConnell recently became professor and director of the division of nuclear radiology of the department of radiology at Hermann Hospital in Houston.

GERALD D. DODD, MD, Houston, has been elected to a three-year term on the Board of Chancellors of the American College of Radiology. Dr Dodd is head of the department of diagnostic radiology at the University of Texas M.D. Anderson Hospital and Tumor Institute and professor of radiology at The University of Texas Medical School at Houston.

J. PALMER SAUNDERS, PhD, of The University of Texas Medical Branch at Galveston has been appointed chairman of the Cystic Fibrosis Project's Organization Advisory Group. As a part of a National Institutes of Health contract, the Cystic Fibrosis Project will develop a state of the art report on the disease.

EDWARD N. BRANDT, MD, executive dean of The University of Texas Medical Branch, has been elected to membership in the Philosophical Society of Texas. The society was founded in 1837 in Houston "for the collection and diffusion of knowledge."

PATRICK ALLEN CATO, MD, Austin has been honored by the Texas Nursing Association as Health Professional of The Year for his medical leadership in child health care and the advancement of school nursing. Dr Cato was the first Medical Advisor to the Austin Independent School District and continues to practice in the child development area and to advise the Austin Independent School District about health services.

Medicine in literature

EDITOR'S NOTE: This month's bibliography, prepared by the staff of TMA's Memorial Library, lists publications related to drowning. These and other publications pertaining to this topic are available from the Memorial Library.

DROWNING

Bennett RM: Drowning and near-drowning; etiology and pathophysiology. *Am J Nurs* 76(6):919-921, 1976.

Cahill JM: Drowning: the problem of non-fatal submersion and the unconscious patient. *Surg Clin North Am* 48(2):423-430, 1968.

Fandel I, Bancalari E: Near-drowning in children: clinical aspects. *Pediatrics* 58(4): 573-579, 1976.

Fletcher HS, Cox JA: Drowning: a seasonal nightmare. *J Med Soc NJ* 73(7):595-598, 1976.

Glasser KL, Civetta JM, Flor RJ: The use of spontaneous ventilation with constant-positive airway pressure in the treatment of salt water near drowning. *Chest* 67(3):355-357, 1975.

Heimlich HJ, Hoffmann KA, Canestri FR: Food-choking and drowning deaths prevented by external subdiaphragmatic compression. Physiological basis. *Ann Thorac Surg* 20(2):188-195, 1975.

Imburg J, Hartney TC: Drowning and the treatment of non-fatal submersion. *Pediatrics* 37(4):684-698, 1966.

Long BW, Warren RB Jr: Near-drowning: a complex pathophysiologic injury. *J Miss State Med Assoc* 16(5):137-141, 1975.

Modell JH, Graves SA, Ketover A: Clinical course of 91 consecutive near-drowning victims. *Chest* 70:231-238, August 1976.

Modell JH: *The Pathophysiology and Treatment of Drowning and Near-drowning.* Springfield, Ill, Thomas, 1971. WO 681 Mo72 1971.

Near-drowning: strategy for survival. *Emerg Med* 6:367-376, February 1974.

Pace NL: Positive end-expiratory pressure (PEEP) in treating salt water near-drowning. *West J Med* 122(2):165-167, 1975.

Pearn J: Neurological and psychometric studies in children surviving freshwater immersion accidents. *Lancet* 1(8001):7-9, 1977.

Putman CE, Tummillo AM, Myerson DA, et al: Drowning: another plunge. *Am J Roentgenol Radium Ther Nucl Med* 125(3): 543-548, 1975.

Raskin MM: Pulmonary edema of acute overdose reaction and near-drowning: some radiographic and physiologic comparisons. *South Med J* 69(8):1063-1065, 1976.

Redding JS: Drowning and near-drowning; pathophysiology, management, and some historical notes. *J Kans Med Soc* 77(5): 181-185, 1976.

Segarra F, Redding RA: Modern concepts about drowning. *Can Med Assoc J* 110(9): 1057 passim.

Siebke H, Breivik H, Rod T, et al: Survival after 40 minutes; submersion without cerebral sequelae. *Lancet* 1(7919):1275-1277, 1975.

IN THE TMA LIBRARY

American Academy of Orthopaedic Surgeons, Committee on Allied Health: *Emergency Care and Transportation of the Sick*

and Injured, ed 2. Chicago, American Academy of Orthopaedic Surgeons, 1977.

American College of Surgeons, Committee on Control of Surgical Infections of the Committee on Pre- and Postoperative Care: *Manual on Control of Infection in Surgical Patients.* Philadelphia, JB Lippincott Co, 1976.

Avery GS (ed): *Drug Treatment; Principles and Practice of Clinical Pharmacology and Therapeutics.* Acton, Mass, Publishing Sciences Group, Inc, 1976.

Bateman JE (ed): *Foot Science; A Selection of Papers from the Proceedings of the American Orthopaedic Foot Society, Inc, 1974 and 1975.* Philadelphia, WB Saunders Co, 1976.

Bennett PB, Elliott DH (eds): *The Physiology and Medicine of Diving and Compressed Air Work,* ed 2. Baltimore, Williams & Wilkins Co, 1975.

Brest AN, Wiener L, Chung EK, et al (eds): *Innovations in the Diagnosis and Management of Acute Myocardial Infarction.* Philadelphia, FA Davis Co, 1975.

Casarett LJ, Doull J (eds): *Toxicology; The Basic Science of Poisons.* New York, Macmillan Publishing Co, Inc, 1975.

Conn HF (ed): *Current Therapy; Latest Approved Methods of Treatment for the Practicing Physician.* Philadelphia, WB Saunders Co, 1977.

Craig TT (ed): *The Humanistic and Mental Health Aspects of Sports, Exercise and Recreation.* Chicago, American Medical Association, 1976.

Criep LH: *Allergy and Clinical Immunology.* New York, Grune & Stratton, 1976.

Daniller A, Strauch B (eds): *Symposium on Microsurgery, XIV.* St Louis, CV Mosby Co, 1976.

Easton RE: *Problem-Oriented Medical Record Concepts.* New York, Appleton-Century-Crofts, 1974.

Egdahl RH, Gertman PM (eds): *Quality Assurance in Health Care.* Germantown, Md, Aspen Systems Corporation, 1976.

Feigenbaum H: *Echocardiography,* ed 2. Philadelphia, Lea & Febiger, 1976.

Asher JF, Gordon BL, Fanta CM, et al (eds): *Physicians' Current Procedural Terminology,* ed 4. Chicago, American Medical Association, 1977.

Gilroy J, Meyer JS: *Medical Neurology,* ed 2. New York, Macmillan Publishing Co, Inc, 1975.

Goldstein J, Freud A, Solnit AJ: *Beyond the Best Interests of the Child.* New York, Free Press, 1973.

Guyton AC, Cowley AW Jr (eds): *International Review of Physiology, IX, Cardiovascular Physiology II.* Baltimore, University Park Press, 1976.

Hamilton A, Hardy HL: *Industrial Toxicology,* ed 3. Acton, Mass, Publishing Sciences Group, Inc, 1974.

Heinonen OP, Slone D, Shapiro S: *Birth Defects and Drugs in Pregnancy.* Littleton, Mass, Publishing Sciences Group, Inc, 1977.

Hooper WT Jr (ed): *Directory of Texas Foundations.* Austin, Tex, 1976.

Illingworth RS: *Common Symptoms of Disease in Children,* ed 5. Oxford, England, Blackwell Scientific Publications, 1975.

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

L. M. DRAPER
Corpus Christi, 1898-1976

T. L. PECORA
Beaumont, 1900-1976

J. D. RAMSEY
Fort Worth, 1933-1976

A. L. VASSALLO
Dallas, 1915-1976

R. J. WHITE
Fort Worth, 1893-1976

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

TEXAS MEDICAL MEMORIAL LIBRARY FUND

1801 N. Lamar Blvd., Austin, Texas 78701

I enclose the amount of $_____. Given in Memory of_____

Please send remembrance card to:

Name _____

Address _____

City and State _____

Donor Information:

Name _____

Address _____

City and State _____

Deaths

L.M. Draper, MD

Dr Leonidas McFerrin Draper, a Corpus Christi physician, died Oct 13, 1976, at the age of 78.
Dr Draper was a native of Clayton, NC, and was graduated from Duke University in Durham, NC, in 1921. In 1925, he received his MD degree from the University of Maryland School of Medicine, Baltimore. His internship was at University Hospital, Oklahoma City. Before moving to Corpus Christi in 1942, Dr Draper practiced in Borger, Tex. He retired in 1974.
Dr Draper had been a member of Texas Medical Association 49 years, and was a life member of the Nueces County Medical Society. His other professional memberships were the Industrial Medical Association, Southern Medical Association and American Medical Association.
He also was a member of the Amarillo Knights Templar and Al-Min Shrine Temple; and a past president of the Borger Rotary Club. Dr Draper, a veteran of World War II, served two tours of duty as a lieutenant commander. He was stationed at the US Naval Air Station in Corpus Christi.
Surviving are his wife, Zelma Deaver Draper, Corpus Christi; daughters, Myra Jo Perley, Pasadena, Calif; Marilyn Stone, Darien, Conn; and Leonora Elder, Kilgore, Tex; sisters, Gertrude Miles, Warrenton, NC, and Lois Holloway, Henderson, NC; and five grandchildren.

T. L. Pecora, MD

Dr Tony Lawrence Pecora, an honorary member of Texas Medical Association, died Aug 20, 1976. He was 76 years of age.
Dr Pecora, who had practiced in Beaumont since 1926, retired in 1971. He formerly was president of the staffs of Hotel Dieu and St Therese hospitals.
The family physician was a native of Prizzi, Italy. He was graduated from Texas Christian University, Fort Worth (1921) and Vanderbilt University School of Medicine, Nashville, Tenn (1925). His internship was at Nashville Metropolitan General Hospital during 1925-1926.
Dr Pecora was a major in the US Army Medical Corps for more than four years. He served in the Panama Canal Zone and was separated from the service in 1945.
He was a past secretary (1935) and president (1949) of the Jefferson County Medical Society. He also was a member of the American Medical Association.
Dr Pecora is survived by his daughter, Mary Louise Pryor, Beaumont; son, Charles P. Pecora, Houston; and sister, Philippina McAdoo, Beaumont.

Dr Draper

Dr Pecora

Dr Ramsey

J. D. Ramsey, MD

Dr John David Ramsey, 43, died as the result of a traffic accident Sept 16, 1976.
Dr Ramsey had been a member of Texas Medical Association since 1958.
A native of Fort Worth, Dr Ramsey had lived in Wichita Falls 12 years. He was a pathologist.
The physician was a 1954 graduate of Texas Christian University. He received his MD degree from UT Southwestern Medical School in 1958. In the same year, he was selected to receive a scholarship from Dallas County Medical Society. His internship was at Parkland Memorial Hospital, Dallas, and he practiced in Dallas from 1959 to 1964.
Dr Ramsey was a member of Phi Beta Pi and Alpha Omega Alpha fraternities, the American Medical Association and Wichita-Young-Archer-Jack County Medical Society.
Surviving Dr Ramsey are his mother, Lucy Ramsey, Fort Worth; and sisters, Martha Lee Thomas, Hurst, Tex, and Jennie Louise Bumguardner, Weatherford, Tex.

A. L. Vassallo, MD

Dr Alfred Louis Vassallo, 60, died Sept 28, 1976, in Dallas.
Dr Vassallo had been a member of St Paul Hospital's obstetrics-gynecology depart-

Dr Vassallo

ment since 1949. During 1971, he was medical staff president at the hospital. He also had served on a number of medical staff committees and had been assistant chief of the Obstetrics-Gynecology Department.

A native of Galveston, Tex, Dr Vassallo attended The University of Texas, Austin, and was graduated from UT Medical Branch, Galveston, in 1942. His internship and residency were at St Paul. Prior to opening his practice in Dallas in 1946, Dr Vassallo served in the US Army.

The physician's professional memberships included Dallas County Medical Society, American Medical Association, Texas Association of Obstetrics and Gynecologists, Dallas-Fort Worth Obstetrics-Gynecology Association, Dallas Southern Clinical Society and Southern Medical Association. He also was a member of the Downtown Rotary Club.

Dr Vassallo is survived by his wife, Dorothy Glafcke Vassallo; daughters, Deborah Vassallo, Leslie Ann Vassallo and Sharman Vassallo; sons, Alfred L. Vassallo, Jr, Douglas Vassallo and John Vassallo, all of Dallas; sisters, Rose Cole and Camille Vassallo, both of Galveston; and brothers, Charles Vassallo of Galveston, and Edward Vassallo and Harry R. Vassallo, MD, both of Dallas.

R.J. White, MD

Dr Richard Joseph White, an honorary member of Texas Medical Association, died Oct 17, 1976, in Fort Worth. He was 82 years of age.

Dr White, a retired surgeon, had lived in Fort Worth since 1924. He had been chief of the surgical staff at St Joseph Hospital, Fort Worth, for 15 years. Upon his retirement in 1963, Dr White was elected lifetime Emeritus-in-Chief of St Joseph's Surgery Department.

He was a past president of the Texas Surgical Society, Southern Society of Clinical Surgeons, and Tarrant County Medical Society. In 1953 he received the prestigious Gold Headed Cane award from the Tarrant County Medical Society. Dr White also was the author of more than 30 scientific articles.

Dr White was a native of Quanah, Tex, but spent his youth in Brady, Tex. He was graduated from Yale University, New Haven, Conn, in 1916. Four years later he received his MD from Columbia University College of Physicians and Surgeons, New York. His internship was at St Luke's Hospital Center, New York.

In addition to his professional associations, Dr White was a member of the River Crest Country Club and the Fort Worth Club.

Surviving are his wife, Marie Whitty White, Fort Worth; sister, Mrs W. S. Barcus, Fort Worth; brothers, W.J. (Bill) White of Brady, Tex, and R.W. White of San Antonio.

At ICA, we believe the good risks shouldn't have to carry the bad risks.

Do you feel your "malpractice" insurance premiums are too high? If you are a physician with a good claim history, the chances are you may be right.

If you are presently securing primary insurance from a government pool, then you are casting your lot with the residual risk inherent in that market. And since insurance is simply a means of spreading risk, your JUA rates are often almost *double* the premiums you would expect to pay in the voluntary market.

Or, if you are presently securing primary coverage from an insurance carrier that bases its rates on national statistics rather than Texas experience, you are picking up the tab for losses in other jurisdictions. Did you know the combined loss ratio of California is seven and one-half times that of Texas?

It is really as simple as this. If you are tired of paying for the mistakes of others and you want a permanent, no-nonsense solution to your professional liability needs, then you'll want to talk to your ICA agent. Remember, we are the only company that offers you a non-assessable, "occurrence form" policy with rates based solely on Texas experience.

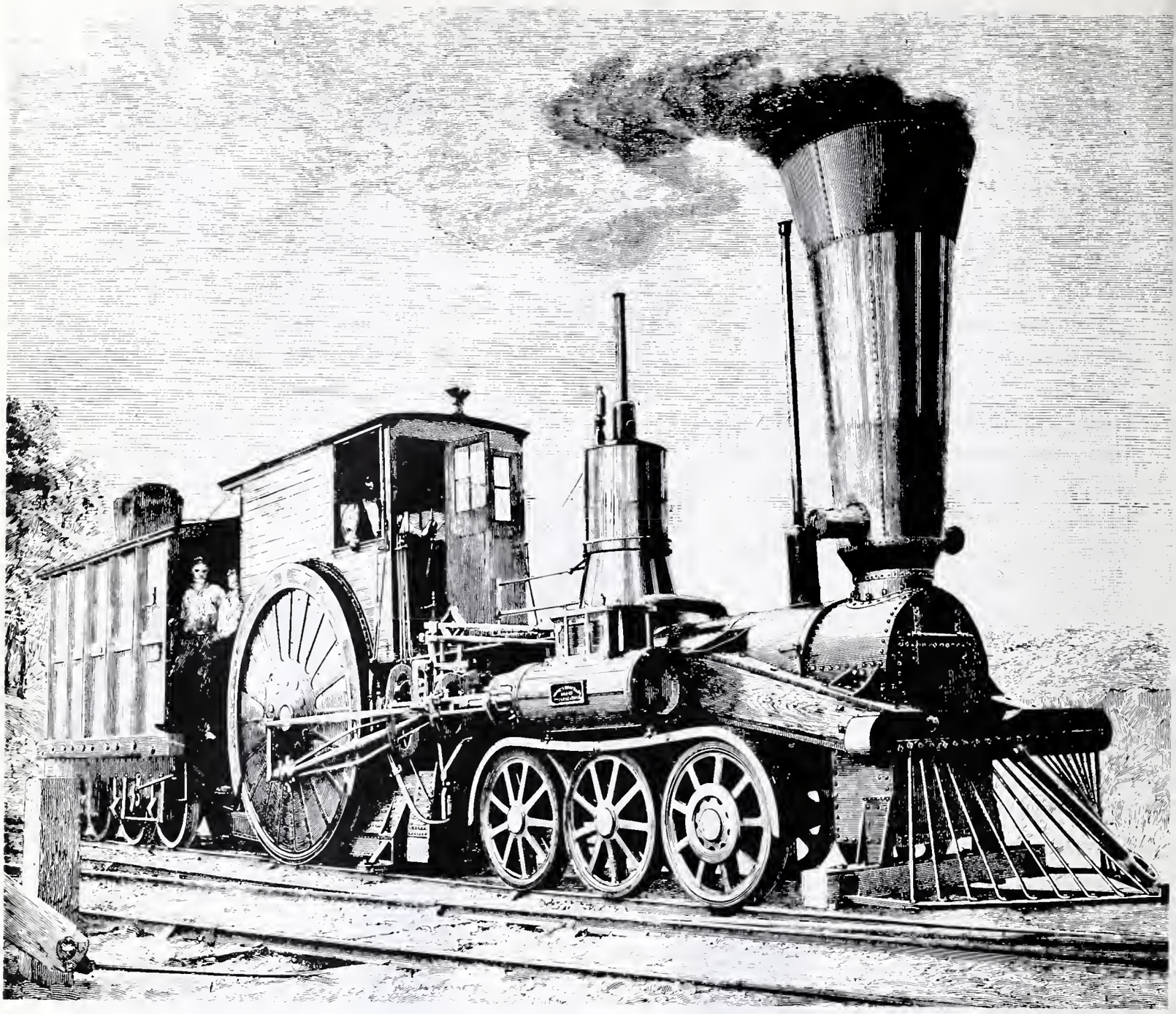
If that makes sense to you, give us a call at (713) 526-4863.

We know your concern is practicing medicine, and our concern is protecting your practice. Call ICA today.

INSURANCE CORPORATION OF AMERICA

Houston, Texas

A+AAAAA Reinsurance Protection provided by INA Reinsurance Company and the Great American Insurance Group.



See The Motorcycle ?

You may not find a motorcycle in this picture, but you'll find plenty of them on Texas' streets and highways.

The trouble is, not enough automobile drivers are seeing motorcycles when they should. Not until it's too late, anyway.

Maybe if motorcycles were as big as trains, you'd be more careful when you see them. But nothing is bigger than human life. And that's what we're really asking you to look out for.

CycleSafe

The Governor's Office of Traffic Safety

MEDICAL ARTS CLINIC ASSOCIATION of corsicana

ANESTHESIOLOGY
LARRY R. STEVENER, M.D., F.A.C.A.*

DERMATOLOGY & SYPHILOLOGY
JOSEPH M. GLICKSMAN, M.D., F.A.A.D.*
J. D. SMITH, M.D., F.A.A.D.*

FAMILY PRACTICE
ENNIS, TEXAS
W. B. KINZIE, MD., D.A.B.F.P.

GENERAL & VASCULAR SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S*
E. SCOTT MIDDLETON, M.D., F.A.C.S.*

GENERAL, VASCULAR & THORACIC SURGERY
ROSS B. REAGAN, M.D.

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
ALLEN M. JONES, M.D.*
JOHN D. NELSON, M.D.*
L. BRYAN COTTON, JR., M.D.*
KENT ROGERS, M.D.*
JACK B. BANKHEAD, M.D.

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
W. GENE MURFF, M.D., F.A.C.O.G.*
NEAL GREEN, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D., F.A.A.O.O.*

ORTHOPAEDIC SURGERY
WALLACE E. LOWRY, JR., M.D.*
JAMES A. DOTSON, M.D.*

PATHOLOGY
MARY G. BANKHEAD, M.D.*

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D., F.A.A.P.*

UROLOGY
WILLIAM V. HALL, M.D., D.A.B.U., F.A.C.S.*

EXECUTIVE DIRECTOR
DON L. BOWEN, M.G.M.A.

*DIPLOMATE OF THE AMERICAN BOARD

TRAVIS CLINIC FOUNDATION AND TRAVIS CLINIC ASSOCIATION

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D., Emeritus
Ken E. Kuykendall, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H Verheyden, M.D.
J. T. Scogin, M.D.
Mary A. Bone, M.D.
J. A. Armstrong, M.D.
D. B. Turner, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Dermatology:
T. S. Arrington, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

Podiatry:
Daniel H. Phelps, D.P.M.

Psychology:
Charles T. Fries, Ed.D.

Business Manager:
Gerald L. Burks

We have your best interest at heart.

Give Heart Fund
American Heart Association

Texas Physicians' Directory

DIRECTORY RATES & DATA: Space is available to TMA members at $12.50 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. Section headings are limited to those specialties designated by the American Medical Association. A list of these specialties is available upon request. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Clinics

THE FORT WORTH CLINIC
1221 West Lancaster Avenue, Fort Worth, Texas 76102
Telephone 817 336-7191

INTERNAL MEDICINE
Kendra J. Belfi, M.D.
John M. Church, M.D.
Thomas J. Coleman, M.D.
Robert R. Dickey, M.D.
Ferd E. Garrison, Jr., M.D.
Cortell K. Holsapple, M.D.
John E. Johnson, Jr., M.D.
O. M. (Jack) Phillips, M.D.

GENERAL SURGERY
John H. Sewell, M.D.
Robert L. Sewell, M.D.

ORTHOPEDIC SURGERY
Thomas E. Rapp, M.D.

CONSULTANTS IN RADIOLOGY
Victor E. McCall, M.D.
Dixon Presnall, M.D.
Harry H. Whipp, M.D.

FIFTH AVENUE CLINIC
650 Fifth Avenue, Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

MEDICAL ASSOCIATES OF CORPUS CHRISTI, P.A.
1533 South Brownlee, Corpus Christi, Texas 78404
Telephone 883-7411

FAMILY MEDICINE
Travis B. Phelps, M.D., F.A.A.F.P.
T. D. Harvey, M.D., A.B.F.P.
H. R. Rose, M.D., A.B.F.P.
C. L. Vernor, M.D.
Frederick S. Maurer, M.D.

ORTHOPEDIC SURGERY
C. M. Yanez, M.D., F.A.C.S.

INTERNAL MEDICINE
G. A. Reeves, M.D.
Pruett Moore, Jr., M.D.
Mark G. Strauss, M.D.

EXECUTIVE DIRECTOR
Gene Hybner

DIRECTOR OF NURSES
Pat Parker, R.N.

Remind your colleagues of your specialty and office location.
Purchase a listing in the "Texas Physicians' Directory."

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

INTERNAL MEDICINE
C. M. Maruri, M.D.
A. J. Nodarse, M.D.

GENERAL SURGERY
B. W. Hink, M.D., F.A.C.S.

FAMILY MEDICINE
J. H. Cochrane, Jr., M.D., F.A.A.F.P.
J. W. O'Bryant, M.D.
A. A. Piske, M.D.

FAMILY MEDICINE AND GENERAL SURGERY
Salvador Faus, M.D.

CLINIC MANAGER
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

MALONE AND HOGAN CLINIC
1501 West 11th Place, Big Spring, Texas 79720, Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.
W. B. Allensworth, M.D.

GENERAL SURGERY
C. B. Marcum, M.D., F.A.C.S.
J. E. Mathews, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
C. T. Moore, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
D. M. Logan, M.D.
V. T. Smith, M.D.

FAMILY PRACTICE
W. R. Strahan, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.
J. W. Kuykendall, M.D.

PEDIATRICS
J. M. Woodall, M.D.
B. R. Owen, M.D., F.A.A.P.

RADIOLOGY & NUCLEAR MEDICINE
Buerk Williams, M.D.
A. P. Goswami, M.D.

UROLOGY
J. W. Cowan, M.D.

PODIATRY
Bradford Glass, D.P.M.

PATHOLOGY
B. A. Campomanes, M.D.

CONSULTANT IN ELECTROENCEPHALOGRAPHY
M. L. Proler, M.D.

ADMINISTRATION
R. L. Heith, Administrator

RUGELEY AND BLASINGAME CLINIC
2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Richard R. Raphael

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.
W. C. Yankowsky, M.D.

UROLOGY
H. Z. Fretz, M.D.

DERMATOLOGY
T. S. Arrington, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

ANESTHESIOLOGY
C. G. Spears, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77030
Telephone 713 797-9191

Internal Medicine and Diagnosis

ALLERGY
Arthur T. Pedersen, M.D.

CARDIOVASCULAR DISEASE
Thomas J. Fatherree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.
Boguslaw Godlewski, M.D.
Matthew T. Monroe, M.D.

DERMATOLOGY
Samuel F. Bean, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Raymond L. Gregory, M.D.
R. Frederick Gregory, M.D.
Thomas J. Hanson, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.
Michael Gagliardi, M.D.
James K. Gordon, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George T. Conklin, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
George Burnazian, M.D.
Benjamin L. Portnoy, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.
James V. Ryan, M.D.

NEPHROLOGY
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

NEUROLOGY
Donald J. Russell, M.D.
George Isaacs, M.D.
Ernesto Infante, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.
Harry R. Price, M.D.
Edward L. Middleman, M.D.
Martin J. Hrgovic, M.D.

PATHOLOGY
Paul B. Radelat, M.D.
Ashok M. Balsaver, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.
Martin L. Kaplan, M.D.
Louis C. Waddell, Jr., M.D.

RADIOLOGY
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.
Joe B. Wilson, M.D.
Howard J. Pollock, M.D.

NUCLEAR MEDICINE
Donald A. Podoloff, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
Robert B. Hall,
Administrator
Richard V. Vanderslice,
Assistant Administrator

HOUSTON HEADACHE CLINIC
Park Plaza Professional Building
1213 Hermann Drive, Suite 855
Houston, Texas 77004
(713) 528-1916

Neurology
Ninan T. Mathew, M.D., F.R.C.P.(C)

HOUSTON PAIN CLINIC
ALEX M. STRAJA, M.D., F.R.C.P.(C), F.A.C.A.
Practice Limited to Treatment of Chronic Pain Syndromes and Nerve Blocks
Practice by Referral Only
Medical Towers, 6608 Fannin, Suite 1417
Houston, Texas 77030, Phone: 713 797-1681

Allergy

HOUSTON ALLERGY CLINIC
Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Richard H. Jackson, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Warren J. Raymer, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
D. W. Waddell, M.D., F.A.A.C.I.A.
Ramon Garrido, M.D., F.A.C.A., F.A.A.C.I.A.*
(Certified American Board of Pediatrics)
*Diplomate American Board of Allergy & Immunology

Suite 444, Hermann Professional Building
6410 Fannin St., Houston, Texas 77030, 713 797-0900

TMA Group Insurance Plans
. . . Another service of your association

PETER B. KAMIN, M.D., P.A.
Certified American Boards of Pediatrics and Allergy
Diplomate American Board of Allergy and Immunology
Allergy and Immunology

Suite 601, Oak Hills Medical Building
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Phone 512 696-4405 or 227-6331

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

JOHN P. McGOVERN, M.D.
Director-Consultant

THEODORE J. HAYWOOD, M.D.
ORVILLE C. THOMAS, M.D.
JOSEPH T. QUENG, M.D.
LAWRENCE G. THORNE, M.D.
K. VENUGOPALAN, M.D.
ROBERT E. SMITH, M.D.
JAMES A. AYERS, M.D.
EUNICE W. CHOU, M.D.
ALBERT LEHMANN, M.D.
GERALD T. MACHINSKI, M.D.

Research Associates
MICHAEL H. SMOLENSKY, Ph.D.
ALAIN REINBERG, M.D., Ph.D.
CALVIN J. McLERRAN, Ph.D.
MICHAEL A. McCORMICK, Ph.D.
GLENNA M. KYLE, M.S.
ITING MAY LU, M.S.

Consultants

EVAN M. HERSH, M.D.
JUDITH H. MARSTON, Ph.D.
Immunology

JAMES A. KNIGHT, M.D.
Psychiatry

HERBERT C. McKEE, Ph.D.
RICHARD K. SEVERS, Ph.D.
Air Pollution

CAROLYN S. LEACH, Ph.D.
Clinical Laboratories

JOHN A. THOMAS, Ph.D.
Clinical Pharmacology

THOMAS D. DOWNS, Ph.D.
Biometrics

WARREN E. SCHALLER, H.S.D.
Allied Health Sciences

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025, 713 661-1444

CORPUS CHRISTI ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology

2530 Morgan, Corpus Christi, Texas, 882-3487

STUART ALAN MASON, M.D., P.A.
Fellow American Association for Clinical Immunology and Allergy
Fellow of the American College of Allergists
Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

ALLERGY AND IMMUNOLOGY
Joseph T. Sams, M.D., P.A. or C. David Meadows, M.D., P.A.
Diplomates of the American Board of Allergy and Immunology

900 W. Randol Mill Rd., Suite 215, Arlington, Texas 76012, 817 277-1161

CHARLES A. RUSH, JR., M.D.
Diplomate/American Board of Allergy & Immunology
Fellow, A.A.A., A.C.A., A.A.C.I.A.

Northeast Medical Clinic Association
7601 Glenview Drive
Fort Worth, Texas 76118

V. E. FRIEDEWALD, M.D., F.A.C.P.
Diplomate American Board of Allergy and Immunology
Allergy

2203 West Tennessee, Midland, Texas 79701, 682-5385

FREDERICK W. GROVER, M.D. & ASSOCIATES
Diplomate of the American Board of Allergy and Immunology
Allergy and Immunology
Children and Adults
6114 Sherry Lane, Preston Center, Dallas, Texas 75225
Telephone: (214) 363-7790

Colon & Rectal Surgery

ALVIN BALDWIN, JR., M.D.
Diplomate American Board of Colon and Rectal Surgery

R. D. DIGNAN, M.D.
Diplomate American Board of Surgery
Diplomate American Board of Colon and Rectal Surgery

Suite 1209 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246
Telephone 824-2573

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery

2715 Fannin Street, Houston, Texas

C.D.L. CROMAR, M.D., M.S., F.R.C.S.E., F.R.C.S.C.
Surgery of the Rectum and Colon

Suite 8, 3337 Plainview, Pasadena, Texas 77504

SOMMAI SEHAPAYAK, M.D.
Diplomate American Board of Colon and Rectal Surgery
Diseases and Surgery of the Colon and Rectum and Fiber-optic Colonoscopy

Medical Tower, Suite 210, 1550 West Rosedale,
Fort Worth, Texas 76104, 817-338-4501 (24 hours)

SUVID PITA, M.D.
Colon and Rectal Surgery
Colonoscopy

Barnett Tower, Baylor Medical Plaza
3600 Gaston Ave, Suite 411
Dallas, Texas 75246
Telephone 214 821-4300

MANUEL G. LAGON, M.D., F.A.C.S.
Diplomate American Board of Colon and Rectal Surgery

FORT WORTH COLON AND RECTAL CLINIC, P.A.
Colonoscopy, Colon and Rectal Surgery

909 Eighth Avenue, Fort Worth, Texas 76104; Telephone 332-1371

Dermatology

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy

1400 Eighth Street, Wichita Falls, Texas

DRS. PIPKIN AND RESSMANN
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies

714 Medical Arts Bldg., San Antonio, Texas 78205

J. GILMORE BRAU, M.D.
Dermatology and Syphilology
X-Ray and Radium Therapy

Hours 9 to 1—3 to 5
3817 Brown Street, Dallas, Texas

JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
A Professional Association
Dermatology, Syphilology, and Cancer of the Skin

3801 19th St., Suite 500, Lubbock, Texas 79410

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies

7777 Forest Lane, Suite 214, Dallas, Texas 75230; Phone 661-7460

GERALD A. CASID, M.D., P.A.
Skin Diseases—Skin Tumors
Hair Transplantation, Dermabrasion, Chemical Peels

333 N. Shiloh Rd., Garland, Texas 75042
Phone 214 272-5451

DAVID S. ALKEK, M.D. AND ASSOCIATES
LON E. ROGERS, M.D.
Dermatology and Cancer of the Skin
Dermabrasion and Chemical Peel

8226 Douglas Avenue, Suite 755
Dallas, Texas 75225
Ph: 214 691-6691

Medical City
7777 Forest Lane
Dallas, Texas 75230

Endocrinology

ENDOCRINE ASSOCIATES OF DALLAS, P.A.
STANLEY FELD, M.D.
RICHARD SACHSON, M.D.
Practice Limited to Endocrinology

Douglas Plaza Bldg., Telephone: 363-5535
8226 Douglas Avenue, Dallas, Texas 75225

Family & General Practice

GLENN C. COATES, M.D.*
GENE V. HAVERLAH, M.D.
SAM A. NIXON, M.D.*
EUGENE M. TOKAR, D.D.S.

1303 Hospital Blvd., Floresville, Texas 78114, 512 393-2527
*Diplomate American Board of Family Practice

SAMUEL SILVA, M.D.
Hair Transplantation

4759 South Freeway, Fort Worth, Texas, 817 923-7374

TMA Physicians' Placement Service

. . . Another service of your association

TMA Members' Retirement Trust (Keogh)

. . . Another service of your association

Gastroenterology

CECIL O. PATTERSON, M.D., F.A.C.P.
Gastroenterology, Gastroscopy, Esophagoscopy
1414 Medical Arts Building, Dallas, Texas, 742-6141-44

MILFORD O. ROUSE, M.D., F.A.C.P.
Consultations in hospitals only

DRS. BAILEY, DOUGLAS AND DEVANEY ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
George T. DeVaney, M.D.
Nisar Ahmed, M.D.

KALMAN NARAYAN, M.D.
Diplomate American Board of Internal Medicine
Gastroenterology, Gastroscopy, Colonoscopy, Polypectomy, E.R.C.P.

909 8th Ave., Suite 7, Ft. Worth, Texas 76104, 817 336-9055

General Surgery

BURT B. SMITH, M.D., F.A.C.S.
Surgery
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery

728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery

1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Thoracic Surgery
Vascular, General and Thoracic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue,
Dallas, Texas 75246, 821-2356

ROBERT J. TURNER, III, M.D., F.A.C.S.
Diplomate American Board of Surgery
General and Peripheral Vascular Surgery

The Saint Joseph Professional Building
1400 South Main Street, Suite 104
Fort Worth, Texas 76104, 335-8311

ROBERT M. STECKLER, M.D.
Diplomate American Board of Surgery
Head and Neck Surgery, Surgery, and Surgical Oncology

Baylor Medical Plaza, Suite 1008, 3600 Gaston Avenue,
Dallas, Texas 75246, 214 827-9880

ROBERT DAVIS, M.D., M.B., B.Ch. (Rand), F.R.C.S. (Edin.)
General Surgery
430 Park Plaza Professional Building, 1213 Hermann Drive,
Houston, Texas 77004; 713 528-0597
By Appointment

Hand Surgery

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopaedic Surgery
PETER R. CARTER, M.D.
Hand Surgery and Upper Extremity Reconstructive Surgery
Baylor Medical Plaza, Barnett Tower, Suite 802, 3600 Gaston Avenue
Dallas, Texas 75246, 214 823-5351

Neurological Surgery

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery

Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Morris Sanders, M.D.
Phillip E. Williams, Jr., M.D.
Ira C. Denton, Jr., M.D.
W. Robert Hudgins, M.D.
Jack Woolf, M.D., Consultant

5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620,
Dallas, Texas 75235; 214 637-0420

8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905,
Dallas, Texas 75231; 214 369-7596

3600 Gaston Avenue, Barnett Tower, Baylor Medical Plaza, Suite 310,
Dallas, Texas 75246; 214 826-1976

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
Neurological Surgery

8210 Walnut Hill Lane, Suite 805, Dallas, Texas 75231, 363-8524

RONALD SMITH, M.D.
Neurological Surgery

901 South Lake, Fort Worth, Texas, 336-0551

CHERRY-LONG NEUROSURGERY ASSOCIATION
GLENN R. CHERRY, M.D., D.A.B.N.S., F.A.C.S.
R. GORDON LONG, M.D., D.A.B.N.S., F.A.C.S.
BENNIE B. SCOTT, M.D.
Neurological Surgery
Baylor Medical Plaza — 605 Barnett Tower
3600 Gaston Avenue — Dallas, Texas 75246
Telephone 214 826-7080

EL PASO NEUROLOGICAL INSTITUTE
Professional Association
Neurology, Neurosurgery, Electroencephalography
Neuro-Radiology, Physiotherapy

William J. Nelson, M.D., Neurosurgery
John T. O'Neal, M.D., Neurosurgery
Robert D. Schneider, M.D., Neurology and Electroencephalography
Steven K. Crouse, M.D., Neurology and Electroencephalography

Medical Plaza Bldg., Suite 307
El Paso Medical Center
1501 Arizona Avenue, El Paso, Texas 79902
Telephone 915 532-8901

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D., F.A.C.S.
E. FLOYD ROBINSON, M.D.
Neurological Surgery

2210 Maroneal, Houston, Texas 77025, 523-3684

TEXAS NEUROLOGICAL INSTITUTE AT DALLAS, P.A.

Neurological Surgery
James E. Bland, M.D.
Martin L. Lazar, M.D.

Medical Neurology, Electroencephalography and Electromyography
Ralph G. Greenlee, Jr., M.D.
Allan L. Naarden, M.D.
Richard R. North, M.D.
William S. Woodfin, M.D.

Neuro-Ophthalmology
Peter R. Bringewald, M.D.

Director, Pain Relief Center and Neuroanesthesiologist
P. Prithvi Raj, M.D.

Consultant in Speech
Josephine Simonson, M.A.

7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

Nuclear Medicine

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., M.D., F.A.C.N.M.
Director - 713 790-0540
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, JR., M.D., F.A.C.N.M.

Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540

Diplomate American Board of Nuclear Medicine

Occupational Medicine

Eric G. Comstock, M.D.

Diplomate American Board of Medical Toxicology

OCCUPATIONAL TOXICOLOGY

1802 Medical Towers, Houston, Texas 77030; 713 790-0160

Ophthalmology

HOUSTON EYE ASSOCIATES

1100 Hermann Prof. Bldg., Houston, Texas 77030, 713 790-1100

Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D., F.A.C.S.
Malcolm L. Mazow, M.D., F.A.C.S.
Robert H. Stewart, M.D., F.A.C.S.
Robert B. Wilkins, M.D., F.A.C.S.
Jeffrey D. Lanier, M.D., F.A.C.S.
Michael A. Bloome, M.D., F.A.C.S.
Paul C. Salmonsen, M.D.
Richard L. Kimbrough, M.D.

DRS. ALPAR, TAYLOR, HOWELL, CURRIE & WEINBERGER

Ophthalmology

John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Hugh B. Currie, M.D.
Bruce L. Weinberger, M.D.
Diplomates of the American Board of Ophthalmology
15 Medical Drive, Amarillo, Texas

TMA News Hotline — Call 1-800-252-9231
. . . Another service of your association

TEXAS RETINA ASSOCIATES

Albert Vaiser, M.D.
William B. Snyder, M.D.
William L. Hutton, M.D.

Diseases and Surgery of the Retina and Vitreous

318 Medical Arts Building, Dallas, Texas, 748-0958

BRUCE C. TAYLOR, M.D.
RICHARD L. WINSLOW, M.D.

Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E., Dallas, Texas 75204
214 521-1153

McPHERSON ASSOCIATES

Diseases and Surgery of the Retina and Vitreous

Alice R. McPherson, M.D.
Robert A. Moura, M.D.
Arthur W. Willis, M.D.
Durham Barnes, M.D.

6436 Fannin, Suite 800, Houston, Texas 77030
713 797-1903

EYE ASSOCIATES

Diseases and Surgery of the Eye

Charles A. Sargent, M.D.
Alan C. Baum, M.D.

3838 Hillcroft, #415, Houston, Texas 77027, 713 781-2882

CORPUS CHRISTI EYE ASSOCIATES

J. Gordon Bryson, M.D.
C. A. Struve, M.D.
John W. Lewis, M.D.

3166 Reid Drive, Corpus Christi, Texas 78404, Phone 853-7319

EYE CENTER OF AUSTIN

3913 Medical Parkway
Austin, Texas 78756; 512 451-8484

Edward J. Petrus, M.D.
Richard E. Nieman, M.D.

JOHN Y. HARPER, JR., M.D., P.A.

Diseases & Surgery of the Vitreous and Retina

601 Madison Square Medical Building
311 Camden Street, San Antonio, Texas 78212
512 226-1812

PETER R. BRINGEWALD, M.D.

Neuro-Ophthalmology

Texas Neurological Institute at Dallas, P.A.
7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

By appointment only.

COASTAL BEND EYE ASSOCIATES

Jack A. Sahadi, M.D.

712 Booty Street, Corpus Christi, Texas 78404
Telephone 512 888-4288

Present your ideas in Texas Medicine

For details on submitting manuscripts,
send for a copy of "Information for Authors."
Mrs. Marilyn Baker, Executive Editor
TEXAS MEDICINE
1801 North Lamar Blvd.
Austin, Texas 78701

Orthopedic Surgery

H. H. Beckering, M.D.
L. Ray Lawson, M.D.
George Truett James, M.D.
Robert D. Vandermeer, M.D.
Wynne M. Snoots, M.D.
R. Stephen Curtis, M.D.

W. B. CARRELL MEMORIAL CLINIC
A Professional Association
2828 Lemmon Ave., Dallas, Texas

FORT WORTH BONE & JOINT CLINIC
918 8th Avenue, Fort Worth, Texas

Louis J. Levy, M.D.
Henry C. McDonald, Jr., M.D.
Fred W. Sanders, M.D.
James M. Beckley, M.D.
Joseph H. Gaines, M.D.

Ralph E. Donnell, M.D.
F. Carlton Hodges, M.D.
J. Price Brock, Jr., M.D.

ORTHOPEDIC ASSOCIATES
Diplomates American Board of Orthopedic Surgery

1133 N. 19th St., Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC
Joseph Barnhart, M.D.
Donald T. Lazarz, M.D.
Lee C. Detenbeck, M.D.
Thomas S. Padgett, M.D.

5620 Greenbriar, Houston, Texas 77005, 526-6262 and
Parkway Towers Professional Building, 150 West Parker Road,
Houston, Texas 77022, 691-3905

LUBBOCK ORTHOPEDIC SURGERY CLINIC
Orthopedic Surgery—Surgery of the Hand
Royce C. Lewis, Jr., M.D.
Kenneth C. Scholz, D.D.S., M.D.
W. Ted Sisco, M.D., P.A.
G. S. Gill, M.D.

3702 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

THE ORTHOPEDIC GROUP OF RICHARDSON
Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.

Orthopedic Surgery

812 S. Central Expressway, Richardson, Texas 75080, 231-6396

THE ARLINGTON ORTHOPEDIC GROUP
H. W. Bendel, Jr., M.D.
E. E. Rising, Jr., M.D.*
C. Poindexter, M.D.
C. R. Vavrin, M.D.
Frank R. Vincenti, M.D.
Diplomates American Board of Orthopaedic Surgery
*Emphasizing Surgery of the Hand

801 West Randol Mill Road, Arlington, Texas 76012, 817 261-8284

LOUIS W. BRECK, M.D., P.A., F.A.C.S.
Diplomate American Board of Orthopaedic Surgery
Practice Limited to Orthopaedic Surgery

1209 North Kansas, El Paso 79902
Telephone 915 544-3831

THURSTON DEAN, M.D.
Diplomate American Board of Orthopedic Surgery

509 N. Garfield Street
Midland, Texas 79701
Telephone: 915 682-0433 or 682-0163

ADDRESS CHANGE? Avoid missing or delayed mail. Send old and new address to Membership Department, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC ASSOCIATES OF DALLAS
F. Leon Ware, M.D.
Dan R. Sutherland, M.D.
John B. Gunn, M.D.
Richard A. Shirley, M.D.
R. Dan Loyd, M.D.

Orthopedic Surgery

3600 Gaston Avenue, Suite 303
Dallas, Texas 75246; 214 823-7090

Otolaryngology

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.
Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

Otology

DANIEL McNAMARA MARTINEZ, M.D., F.A.C.S.
Otology and Otoneurology

8210 Walnut Hill Lane, Presbyterian Professional Building,
Suite 400, Dallas, Texas 75231; 214 691-7331

DALLAS HEARING, BALANCE AND OCULAR PULSE LABORATORY
Audiology—Vestibulometry—Non-invasive Carotid and Vertebral Circulation Studies

402 Presbyterian Professional Building, 8210 Walnut Hill Lane,
Dallas, Texas 75231; 214 691-7367

Pathology

FORT WORTH MEDICAL LABORATORIES
John J. Andujar, M.D.
Dorothy Patras, M.D.

1400 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

BROWN & ASSOCIATES MEDICAL LABORATORIES
Clinical Pathology, Hematology, Surgical Pathology, Exfoliative Cytology and Electrophoresis
Wilson G. Brown, M.D.
George V. Miller, M.D.
Walter G. Olin, Jr., M.D.
John R. Thomas, M.D.
S. Joseph Skinner, M.D.
Joe B. Haden, M.D.
Enrique van Santen, M.D.
Elaine V. Shalek, M.D.
Robert H. McNeely, M.D.
Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas 77030
220 Park Plaza Prof. Bldg., Houston, Texas 77004
Telephone 527-5230
Mailing Containers on Request—Office Pickup Service in Houston

PRUITT MEDICAL LABORATORIES
Jack Pruitt, M.D.
E. Hernandez, M.D.
Diplomates, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology,
Medicolegal Consultation
P. O. Box 160, Lufkin, Texas 75901, 634-4451

TMA International Travel Program
. . . Another service of your association

WACO CLINICAL PATHOLOGY LABORATORY
K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Robert Wayne Walter, M.D., F.A.C.P.
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation
Mailing Containers on Request
2112 Washington Ave., P.O. Box 3160, Waco, Texas 76707, 756-7226

J. S. Wilkenfeld, M.D., Medical Laboratories, Inc.
J. S. WILKENFELD, M.D. ENA E. MOCEGA, M.D.
Diplomates of the American Board of Pathology
Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology
8850 Long Point Road, P.O. Box 55008
Houston, Texas 77055, 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

ARTHUR L. RAINES, M.D. AND ASSOCIATES
Pathologists
DIPLOMATES, AMERICAN BOARD OF PATHOLOGY
Clinical Pathology — Surgical Pathology
Exfoliative Cytology — Medicolegal Consultation
Hospital and Clinic Laboratory Consultation
P. O. Box 118, Cleburne, Texas 76031
817 645-9181, Ext. 360
MAILING CONTAINERS ON REQUEST

HENRY B. OWENS, M.D., F.C.A.P.
Diplomate American Board of Pathology
Cytology and Tissue Pathology Only
801 E. Border St., Suite M, P. O. Box 1627
Arlington, Texas 76010, 817 461-2771
Mailing Containers on Request—Office Pickup Service in Arlington

Physical Medicine & Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES WARM SPRINGS FOUNDATION, INC.
P. O. BOX 58, GONZALES, TEXAS 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade
DAVID E. GUMFER, Administrator
LARRY E. BROWNE, M.D., Medical Director

ROBERTO G. ROLFINI, M.D.
Diplomate American Board of Physical Medicine & Rehabilitation
Rehabilitation Medicine and Electromyography
702 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205, Telephone 226-2424

WILLIAM T. BLESSUM, M.D.
Physical Medicine, Rehabilitation, & Electromyography
7342 Oak Manor, Suite 125
San Antonio, Texas 78229; Telephone 512 349-6573

SHOAL CREEK REHABILITATION CENTER
3501 Mills Avenue, Austin, Texas 78703, 512 452-0361
Rodney J. Simonsen, M.D., Medical Director
Joe T. Powell, M.D., Associate Director
Comprehensive rehabilitation facilities for spinal cord injury, stroke, head injury, pain management, and related conditions

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D., F.A.C.S.
THOMAS M. BIGGS, M.D., F.A.C.S.
LAURENCE E. WOLF, M.D.
Diplomates American Board of Plastic Surgery
PLASTIC SURGERY
5419 Caroline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery
530 Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Cosmetic Surgery
612 Doctors Bldg., Fort Worth, Texas 336-0356

PLASTIC SURGERY ASSOCIATES
Simon Fredricks, M.D., F.A.C.S.
Charles W. Bailey, Jr., M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery
Jonathan J. Dora, M.D.
1103 Medical Towers, Houston, Texas 77025, 523-5575

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
Plastic & Reconstructive Surgery
Cosmetic Surgery
606 Medical Plaza Bldg., 800 Eighth Avenue, Fort Worth, Texas 76104, 335-4751

VALENTIN GRACIA, M.D., P.A., F.A.C.S., F.I.C.S., D.A.B.
Aesthetic Surgery—Burns
1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

FRANCIS A. MORRIS, JR., M.D.
Diplomate American Board of Plastic Surgery
Plastic Surgery
3100 Red River, Austin, Texas 78705; 512 476-9149

PATRICK H. BECKHAM, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery
1111 West 34th Street, Suite 207, Austin, Texas 78705, 459-3258

WILLIAM E. BARNES, M.D.
Diplomate American Board of Plastic Surgery
Cosmetic Surgery
Plastic & Reconstructive Surgery
1301 West 38th Street, Suite 608, Austin, Texas, 454-7659

JOHN E. CARTER, M.D., P.A.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Telephone: (Area Code 512) Office 696-2390 Medical Exchange 227-6331

JOSEPH C. FORD, M.D., P.A., F.A.C.S.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery
508 Madison Square Medical Building
311 Camden, San Antonio, Texas 78215, 224-5509

BROMLEY S. FREEMAN, M.D., F.A.C.S.
D. ROBERT WIEMER, M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery
Plastic & Reconstructive Surgery

7000 Fannin, Suite 1770, Houston, Texas 77025
713 795-5584

JACK L. CONLEE, M.D.
Diplomate American Board of Plastic Surgery
Plastic and Cosmetic Surgery

3318 S. Alameda, Suite 1, Corpus Christi, Texas, 855-7359

PLASTIC SURGERY ASSOCIATION
LEONARD KOCH, M.D.
Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410, 806 792-2313

ROBERT L. CLEMENT, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive Surgery

1111 West 34th Street, Suite 205, Austin, Texas 78705, 512 459-3101

STEPHEN C. LESAUVAGE, M.D.
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1318 Clinic Drive, Tyler, Texas 75701; 214 593-8296

Psychiatry

Perry C. Talkington, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Larry R. Kimsey, M.D.
Charles M. Smith, M.D.
Gregory G. Dimijian, M.D.
Linda R. Hughes, M.D.
Roy H. Fanoni, M.D.
Byron Howard, M.D.
Larrie W. Arnold, M.D.
Madeline W. Harford, M.D.
John G. Looney, M.D.

Practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

ALAN B. BRINSMADE, M.D.
General Psychiatry
Specializing in Psychotic Illnesses-Acute and Chronic

Hermann Medical Center Professional Building
Houston, Texas 77025, 713 524-8496

Texas Continuing Education Directory
. . . Another service of your association

FABRE CLINIC

LOUIS F. FABRE, JR., M.D., Ph.D.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy
Children — Family — Alcoholism

Free of charge to patient MEDICATION CLINIC
FOR PATIENTS WITH ANXIETY OR DEPRESSION
IN CONJUNCTION WITH CNS RESEARCH WITH
PSYCHOPHARMACOLOGICAL COMPOUNDS

DAVID McLENDON, Ph.D.
Licensed Clinical Psychologist
Individual and Group Psychotherapy
Diagnostic Evaluations and Counseling

H. JOHN JACKSON, Ed.D.
Educational Psychologist
Administrative Consultation to School District
Program Organization Consultation
Individual Family Counseling

5503 Crawford Street, Houston, Texas 77004, 713 526-2328

PERRY C. TALKINGTON, M.D.
Psychiatry

4645 Samuell Blvd., Dallas, Texas 75228, 214 381-3849

CHARLES B. COVERT, M.D., P.A.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy

San Felipe Green Professional Building, Suite 314
1900 Yorktown, Houston, Texas 77056; 713 627-9988

HARRIS HAUSER, M.D. AND ASSOCIATES
Psychiatry

Frank H. Chesky, M.D.
Jose A. Gutierrez, M.D.
Harris M. Hauser, M.D.
Linda S. Blume, A.C.S.W.

7777 Southwest Freeway, Suite 1004, Houston, Texas 77074;
713 772-4600
1740 West 27th, Suite 315, Houston, Texas 77008; 713 772-4600

MEMORIAL LIBRARY
TEXAS MEDICAL ASSOCIATION

1801 North Lamar Blvd., Austin, Texas 78701, 512 477-6704

A clinical library designed to assist the practicing physician

50,000 bound volumes • extensive reprint and periodical collection
• 400 lay and professional films • pathological slide sets
• cassete and reel-to-reel tapes from AMA, Audio Digest
• MEDLINE computer data service

. . . Another service of your association

Psychiatry & Neurology

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., J. J. Leyva, M.D.

Department of Psychology
Allen Goss, Ph.D., Jim M. Phillips, Ph.D.
Practice Limited to Neurology and Psychiatry
Office Hours By Appointment
First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

STEPHEN WEISZ, M.D.
Practice Limited to Neurology and Psychiatry

1637 Medical Arts Bldg., Dallas, Texas 747-5183

HAUSER CLINIC
Psychiatry, Neurology, Electroencephalography and Electromyography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
*H. James Stuart, M.D.
Javier A. Zapata, M.D.
*Susan B. Darsey, M.D.
*Harvey A. Rosenstock, M.D.

Section of Psychology
Ken R. Vincent, Ed.D.

Administrator
Richard J. Kurzenberger

Section of Neurology
*Gerald Ratinov, M.D.
*Robert M. Gordon, M.D.
*Ronald DeVere, M.D.

Section of Social Work
Pamela Plimmer, A.C.S.W.
Marguerite Papademitriou, A.C.S.W.
Margery Engel, M.S.S.W.
Jean Lerner, M.S.W.

808 Memorial Professional Building, Houston, Texas 77002
Telephone 713 224-5041

*Diplomate, American Board of Psychiatry and Neurology

THE FORT WORTH NEUROPSYCHIATRIC CENTER
*Herbert G. Rush, M.D.
A. Arauzo, M.D.
Sanford Lehrer, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

*Diplomate American Board of Psychiatry and Neurology

H. KORNBLIT, M.D.
Neurology—Headache Clinic

Memorial City Prof. Bldg. #176
902 Frostwood, Houston, Texas 77024

MEMORIAL NEUROLOGICAL ASSOCIATION
Neurology, Electroencephalography, Electromyography and C. T. Scan

James L. Frey, M.D.
Harris M. Hauser, M.D., F.A.A.N.
Cheor J. Kim, M.D.
Lorenzo Lorente, M.D.

1740 West 27th, Suite 315, Houston, Texas 77008, 713 861-4516
7777 Southwest Fwy., Suite 1004, Houston, Texas 77074, 713 772-4600

TMA Automobile Lease Program
. . . Another service of your association

HAUSER PSYCHIATRIC ASSOCIATES
Psychiatry and Neurology
*Ronald J. Hauser, M.D., F.A.P.A.

Individual and Group Therapy
Marital and Family Counseling

Laurence J. Gross, M.S.W., S.P.
Judy Kanas, M.S.W., S.P.

*Diplomate, American Board of Psychiatry and Neurology

9100 Westheimer, Suite 40
Houston, Texas 77063; 781-6742

Radiology

ROYAL WERTZ, M.D., F.A.C.R.
Practice Limited to Radiology

800 Rusk Street, Amarillo, Texas 79106, 373-8324

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D., D.A.B.R.

RADIOLOGY
109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

KARL THORD DOCKRAY, M.D.
Diplomate, American Board of Nuclear Medicine
Diplomate, American Board of Radiology

Roentgenology, Nuclear Medicine, Xeromammography
Mobile Film Service for Area Nursing Homes

763-5774 Office 765-7701 Page 762-0471 Mobile
Lubbock, Texas

Rheumatology

DON E. CHEATUM, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204, 823-4151

ROY M. FLEISCHMANN, M.D.
Diplomate American Board of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

3707 Gaston Avenue, Suite 810, Dallas, Texas 75246; 827-0868

Thoracic Surgery

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.
Maruf A. Razzuk, M.D.

DRS. PAULSON, URSCHEL, RAZZUK AND ASSOCIATES
Thoracic and Cardiovascular Surgery

1201 Barnett Tower
3600 Gaston Avenue, Dallas, Texas 75246; 824-2503

TMA Action/TMA Legislative Bulletin
. . . Another service of your association

JOHN L. KEE, JR., M.D.
Thoracic Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246; 826-5184

ALLAN L. GRAHAM, M.D., F.A.C.S.
KARAMAT U. CHOUDHRY, M.D., F.A.C.S.
Diplomates American Board of Surgery and Board of Thoracic Surgery
ROBERT W. MILEY, M.D.
Diplomate American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
800 Eighth Ave., Suite 626, Fort Worth, Texas 76104: 332-7878

HECTOR O. YANES, M.D., P.A., F.A.C.S., F.A.C.C.
Cardiac, Vascular and Thoracic Surgery

Diplomate American Board of Surgery and
American Board of Thoracic Surgery

432 Medical Plaza, 800 Eighth Ave.,
Fort Worth, Texas 76104, 332-1947

RICHARD E. WOOD, M.D.
Cardiac, Thoracic and Vascular Surgery
Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890

Hours By Appointment

Hugh E. Wilson, M.D. and Associates
HUGH E. WILSON, M.D.
CHARLES T. MEADOWS, M.D.
Thoracic and Cardiovascular Surgery
6161 Harry Hines Boulevard
Dallas, Texas 75235; 214 637-3470

Urology

JO C. ALEXANDER, M.D., FOSTER FUQUA, M.D.,
ELGIN W. WARE, JR., M.D., GEORGE E. HURT, JR., M.D.,
DONALD E. JOHNSON, M.D. & ASSOCIATES
L. MICHAEL GOLDSTEIN, M.D., THOMAS P. REILLY, M.D.
Urology

3600 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC
Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109

Dolphus E. Compere, M.D., F.A.C.S.
Grant F. Begley, M.D., F.A.C.S.
Hugh Lamensdorf, M.D., F.A.C.S.

Diplomates of American Board of Urology

H. M. GIBSON, JR., M.D., F.A.C.S.
ABEL GARDUNO, M.D.
Certified by American Board of Urology
Practice Limited to Urology

512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephone 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
NEWTON F. McDONALD, M.D.
JAMES E. MORNEAU, M.D.
Practice Limited to Urology

1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

TMA Physicians Benevolent Fund
. . . Another service of your association

DONALD J. NEESE, M.D.
Diplomate of American Board of Urology

Practice Limited to Urology

570 Park Plaza Professional Building
1213 Hermann Drive, Houston, Texas 77030; 713 524-3931
400 Medical Center Blvd., Suite 207, Webster, Texas 77598; 713 332-2466

EUGENE R. TODD, M.D., P.A.
Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3434 Swiss Ave., Suite 406, Dallas, Tex. 75204, 214 826-3500

DALLAS UROLOGY ASSOCIATES
David D. Reisman, M.D.
Donald J. Logan, M.D.
Allen S. Plotkin, M.D.
Donald L. McKay, M.D.
Practice Limited to Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

JOSEPH D. MITCHELL, JR., M.D.
TROY W. SCOTT, M.D.
Urology

Barnett Tower, Suite 906, Baylor Medical Plaza,
3600 Gaston Avenue, Dallas, Texas 75246

Thanks to you, I still have a home.

For over 30 years, Smokey has been asking you to be careful with fire.

During that time, you've helped cut the number of careless fires in half.

So from Smokey Bear and all of us who live in the forest, thanks for listening. And keep up the good work.

Ad Council A Public Service of This Magazine & The Advertising Council

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

TEXAS REPRESENTATIVES

A. F. Ennis, Jr. and B. C. Crim, Suite 210, 712 N. Washington, Dallas 75246 Telephone (214) 821-4640
W. L. Kirk, 1508 Hermann Prof. Bldg., Houston 77030 Telephone (713) 797-9835
M. C. Rollans, 408 GPM Bldg., South Tower, San Antonio 78216 Telephone (512) 344-5901

TEXAS
GULF COAST

EMERGENCY PHYSICIANS

Career oriented primary care emergency physicians with additional post graduate training and/or emergency medicine experience. Continuing educational requirements mandatory. Teaching and non-teaching emergency departments available. The only emergency medicine group staffing emergency department-Texas Medical Center. Board eligibility or certification with interest in trauma qualifies for director status. Immediate openings. Guarantee $52,000-$58,000. Fringes: Malpractice, major medical, life, disability income. Houston metropolitan facilities. Excellent schools, churches with a friendly area population. Cultural and educational opportunities. Fresh and salt water. Astrodome, major league sports (football, baseball, ice hockey, golf tournaments, tennis tournaments). Only qualified need apply. Call or Send CV: Gulf Coast Emergency Physicians Association, 3325 Plainview, Suite 7, Pasadena, Texas 77504, 713-943-1918.

HOUSTON OFFICE BUILDING
SUITABLE FOR CLINIC

NEAR MEDICAL CENTER
AND MIDTOWN AREA

14,405 square feet with 73 off street parking spaces (27 covered and 46 rooftop).

$375,000. Owner-financed.

MARTIN & MARTIN ASSOCIATES

3106 Brazos
Houston, Texas 77006
AC 713-523-5545

Classified Advertising

Physicians Wanted

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from the big city problems. Call collect Dr. David M. Pogue, at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIAN AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6383.

PSYCHIATRIST, board certified or eligible needed for modern forensic psychiatry program. Texas license required. Salary $34,000+. Immediate openings. Call or write: Robert B. Shelton, M.D., Superintendent, Rusk State Hospital, P. O. Box 318, Rusk, Texas 75785; 214-683-5481.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic; adjacent to 36 bed hospital, recently remodeled. Salary $40-48,000 per year. Partnership available after trial period. Contact Willis G. Youens, Jr., M.D., 105 N. Grohmann, Weimar, Texas 78962; 713-725-8545.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

EMERGENCY DEPARTMENT GROUP, HOUSTON AREA, EXPANDING—choice of salary or fee-for-service with guarantee—malpractice paid—Call 713-861-7942 or write Greater Houston Emergency Physicians Association, 625 West 19th, Houston, Texas 77008.

FAMILY PRACTICE—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas 512-672-2811.

FAMILY PRACTITIONER WANTED to join two established family practitioners in Trinity, Texas. Former partner is leaving November 1976 for residency. A large ready made practice is available now. You are invited to investigate clinic and hospital facility, compatibility, economic and environment of rural practice in an outstanding recreational area that includes 2,000,000 acres of East Texas forest, 90,000 acre Lake Livingston, various golf courses, marinas, and country club developments. All guarantees, etc. are negotiable. Bring your wife. Sam R. Barnes, M.D. and J. Richard Cook, M.D., P.O. Box 672, Trinity, Texas 75862.

FAMILY PRACTICE, GENERAL PRACTICE—Wanted immediately to join physician staff in rural community one-hour from Dallas-Fort Worth area. Extremely active practice with good benefits and an opportunity to enter into the corporation. Practice is with physicians clinic, 26-bed hospital, and 42-bed nursing home within the same building complex. Excellent arrangement for family practice. For further information contact Roger E. Marks, M.D., 817-897-2215 or 817-897-4436; Glen Rose, Texas.

PSYCHIATRIC RESIDENCY in approved three-year program. Effective connections with universities, medical schools, private clinics and community centers. Outstanding faculty and programs. Stipends with Texas license are $15,000, $16,000 and $17,000 per year. In addition, now offering residency in child psychiatry. For full information, write to Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

CHILD PSYCHIATRY RESIDENCY may be taken before or after adult psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psychopharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed in-patient unit for children. Liaison with graduate schools, medical school and community programs. Stipends: First year, $15,000; second year, $16,000; third year, $17,000; fourth year, $18,000. Contact Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

INTERNIST—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

WANTED: INTERNIST TO JOIN busy solo internist in new office. Complete clinical laboratory facilities plus x-ray. City of 25,000 population in Northeast Texas. Drawing area of 100,000. Two new hospitals. High caliber medical community. Excellent recreational facilities; good schools and churches. Ideal family city. Please reply to Ad-625, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN WANTED: FAMILY CARE AND CHRONIC. Hospital facilities available ten miles. Clinic space available downtown Kemp. Pharmacy available. 45 miles southeast Dallas. Close to Cedar Creek Lake, fastest growing recreational-retirement area in Texas. Projected 100,000 population by 1980 in area. Country club, golf course, three miles. Excellent opportunity. Please reply to Edmund Horton, Ph., P.O. Box 449, Kemp, Texas 75143; phone 214-498-2011.

WANTED: FAMILY PRACTITIONER TO JOIN three man group. East Central Texas. New joint commission approved 30 bed hospital. Airport. New junior-senior high complex. Railroad division point. Small industry. Primary income ranching. Three fishing lakes. Deer, quail, dove hunting. Country club. No initial investment necessary. Contact Drs. Gage, Cox or Halbert, 315 Main Street, Teague, Texas 75860, 817-739-2561.

GENERAL INTERNIST AND FAMILY PRACTITIONER NEEDED to join nine man group in Clifton, Texas. Located in the heart of Texas, 30 miles NW of Waco; 15 miles from Lake Whitney. Good fishing; excellent hunting; new modern golf course. Excellent schools and churches in a growing progressive community and directly associated with a 75 bed, Hill Burton hospital which is fully accredited by the joint commission. Terms open at first with partnership in future. Please contact V. D. Goodall, M.D., Clifton Medical & Surgical Clinic Association, Clifton, Texas 76634. Telephone 817-675-8621 or 675-3113.

FAMILY PRACTITIONER: Psychiatric Clinic, seeking to expand medical services in the practice, has fully furnished facilities, including office & staff, for family physician. Choice location, close to four hospitals. Apply D. McCann, 2616 N. Oregon, El Paso, Texas 79902. 913-532-5232.

PUBLIC HEALTH DIRECTOR: The City of Austin, Texas, is accepting applications for the position of Director, Austin-Travis County Health Department. Full medical and administrative direction of local public health activities in a $4 million department of the City. Must be an MD with administrative experience; Texas license and MPH preferred. Salary starts at $35,000+, depending upon qualifications. Send resume to: Dan H. Davidson, City Manager, P.O. Box 1088, Austin, Texas 78767; 512-477-6511. Equal employment opportunity.

PHYSICIAN WANTED TO JOIN three-man group; two GP's, general surgeon (all Board). Practice in Hearne, Texas, population 5,000; drawing area 12,000+. Contact Dr. Ken Kennamer, Hearne, Texas; 713-279-3451 or 713-279-3100.

GENERAL PRACTITIONER NEEDED: To work with general surgeon doing GP work. Excellent opportunity for a doctor desiring family practice work. May start with salary of $45,000 per year negotiable. City has population of 9,000 with trade area of 25,000 to 30,000. Contact Chris S. Cruzcosa, M.D., 300 S. 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

FAMILY PRACTITIONER WANTED to join multi-specialty group in Central Texas. Salary first year to start $45,000 with bonus at the end of the year based on percentage of work. Please reply to Ad-706, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST AND GP/FP—Pine hills of East Texas. Thriving city of 65,000. Extraordinary cultural and recreational activities. Medical center of East Texas. Nine man group, 3 GP, 3 IM, 3 surgeons. Please contact Robert Felix, Administrator, Medical and Surgical Clinic, Box 6026, Tyler, Texas 75701. Phone 214-593-1721.

PHYSICIANS WANTED—Growing hospital in progressive East Texas town near metroplex needs ambitious physicians to join staff. Write Paul Bennet, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75647.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $10.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED: Middle aged, perhaps older, well-trained and experienced internist or family practitioner. Light hours, easy responsibility backed by eight certified specialists staffing a very modern physician-controlled JCAH surgical and medical specialty hospital that adjoins offices. New 150 bed JCAH general hospital minutes away. Excellent southwestern climate; superior, unhurried lifestyle in wealthy 23,000 population city in center of large prosperous trade territory with two major medical centers immediately available. Above average earning potential. Guarantee negotiable with hospital furnishing office and complete ancillary services, both professional and business. This is for a competent man tired of the rat-race. He will practice better medicine for an appreciative clientele; his living conditions will be improved and less costly than in a large city. He will be only three or four minutes from work, shopping centers, golf course or airport. Hence an opportunity worth exploration. Contact E. O. Nichols, Jr., M.D., E. O. Nichols Hospital, Inc., Plainview, Texas 79072; 806-296-7425.

INDUSTRIAL PHYSICIAN TO JOIN multispecialty group as an addition to a large industrial department. Some surgical training desired; family practice boards acceptable. Work consists of pre-employment physicals, industrial injuries, and family practice. Salary and partnership negotiable and competitive. Keogh plan available. Adequate time off. Modern clinic facilities. Growing town of 125,000. Send curriculum vitae and references to Harry Ledbetter, M.D., 1518 Tenth Street, Wichita Falls, Texas 76301.

GENERAL INTERNIST AND FAMILY PHYSICIAN—To join 20-man multi-specialty group in community of 70,000. New facilities. Liberal guarantee with incentive first year; then shareholder. Cultural activities; recreational activities, golf, tennis, hunting, water sports. Contact Angelo Clinic Association, 120 East Beauregard, San Angelo, Texas 76903.

PHYSICIANS: You can find the perfect practice opportunity through Medenco Hospitals, Inc. A variety of settings from rural to metropolitan plus an attractive financial package are available with Medenco. Contact: Physician Relations, Medenco Hospitals, Inc., P. O. Box 3448, Houston, Texas 77001; toll free in Texas 800-392-6467.

PATHOLOGIST—AP&CP CERTIFIED with two to three years experience to join pathologists' group in private practice in Houston, Texas. Special interest in bacteriology and clinical chemistry. Send curriculum vitae and recent photograph to Ad-717, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

TEXAS, NORTHEAST: Emergency physicians. Immediate openings available in established ACEP oriented group. Positions in several communities available. Prefer career-oriented emergency MDs. Additional training and/or experience required. Flexible schedule, fee-for-service with guarantee and usual fringes including malpractice insurance. Write: Emergency Medicine Consultants, 3600 Gaston Avenue, Dallas, Texas 75246, or call 214-823-6850.

PRIVATE PRACTICE OPPORTUNITY with guaranteed success now available in a modern 25 bed, JCAH-approved private hospital and a new four-doctor clinic; located in the heart of the Gulf Coast industrial center, twenty minutes from both downtown Houston, Texas, and Space Craft Center; clinic furnishes all overhead including rent, supplies and personnel; to insure success, a guarantee of $3,000 per month for six months is offered; earnings limited only by personal desire as you maintain a private fee-for-service practice. For details, contact Dr. Floyd D. Pendergrass, FAAMA, FRSH, Executive Director, Deaton Hospital Inc., 208 North Main Street, Galena Park, Texas 77547. Phone or wire collect 713-672-6311.

WANTED—GENERAL SURGEON to join established surgical practice in small city in the East Texas area. Send curriculum vitae to Athens Surgical Clinic, P. O. Box 1490, Athens, Texas 75751; telephone 214-675-5781.

POSITION AVAILABLE, SOUTHWEST TEXAS STATE UNIVERSITY. Physician—responsible for providing basic medical care as required by students enrolled at SWTSU. Applicants must have an MD degree and hold a current license to practice medicine in the State of Texas. Application deadline: June 15, 1977. Submit resume to: John Noone, University Infirmary, SWTSU, San Marcos, Texas 78666; 512-245-2161. SWTSU is an affirmative action/equal opportunity employer.

SOUTHWESTERN U. S. Three board certified pediatricians desire association of fourth, eligible or board certified, member who is interested in general pediatrics. Space available now, salary flexible. Located in a beautiful city in Texas; 70,000 population; in close proximity of metropolitan area. Practice incorporated; excellent schools, hospitals, recreation. Reply Ad-719, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PHYSICIAN—Age 35 or under. Preferably with some training in trauma to associate with an eight doctor multi-specialty group. Straight salary or salary plus participation with early partnership. Many fringe benefits. Curriculum vitae, references with reply. Contact V. Goodman, administrator, or B. A. Lawrence, M.D., 7630 Bellfort, Houston, Texas 77061. Telephone 713-644-3344.

OB/GYN man to join multi-specialty group of six. Salary first year $40,000 with a bonus of $5,000. We will take either an OB/GYN man or a family practitioner willing to do some obstetrics and gynecology. Please reply to Ad-720, *Texas Medicine*, 1801 North Lamar Blvd., Austin Texas 78701.

INTERNIST WANTED to join multispecialty group in Texas. Please give pertinent information and telephone number with first letter. Salary open, possibly $45,000 to $50,000. Please reply to Ad-721, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

COMMUNITY PHYSICIAN—We seek a physician interested and qualified in ambulatory care and in the development of innovative family-centered programs in both treatment and health promotion. Work would be performed in a modern, multi-service community center. Requires Texas license. Excellent benefits; salary competitive and negotiable. Send resume or inquiries to: Director of Health, City of Dallas, 1936 Amelia Court, Dallas, Texas 75235; phone 214-638-7670, ext. 201.

GENERAL SURGEON: American graduate, preferably just out of residency to do all major surgery for well established clinic. Please reply to Ad-722, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTITIONER, before you decide on a location to practice, invest five minutes of your time in a collect call to: Gerald Moore, Lynn County Hospital District, Tahoka, Texas; 806-998-4533.

HOUSTON EMERGENCY PHYSICIANS ASSOCIATES has immediate openings for career oriented emergency physicians with surgical or emergency medicine backgrounds. Continuing education required. Teaching and non-teaching positions available in the city limits of Houston, Texas. Our physicians' present salaries are between $50,000 and $80,000 per annum based on tenure and experience. Flexible scheduling to allow for vacations and continuing education. Benefits include malpractice insurance, major medical, life, disability income. Call or send CV: Houston Emergency Physicians Associates, P. O. Box 36949, Houston, Texas 77036; 713-776-1081.

PRIMARY CARE POSITIONS available immediately. Assistance with travel, office overhead, and salaries or guarantees negotiable. For details send CV and preferences to Ad-725, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

NEED FULL TIME PHYSICIAN at medical facility of Gary Job Corps Center in resort community of San Marcos, Texas. Involvement is 8 a.m. to 5 p.m., Monday through Friday and on call alternate nights and weekends. Fringe benefits include a desirable housing arrangement and prepaid malpractice insurance. Salary upper $30s and negotiable. Contact Dr. M. D. Heatly, 512-396-6570 or at night 392-3044; or Mr. Al Martinez, Hospital Administrator, 396-6422; or write P.O. Box 645, San Marcos, Texas 78666.

WANTED A RETIRED PHYSICIAN to associate with medically oriented company. Very lucrative position available to right man. Send resume to: Mrs. Linda Driesslein, 2708 Southwest Freeway, Suite 23, Houston, Texas 77098.

NEEDED: PHYSICIANS to practice at Mexia State School, located in Central Texas just 30 minutes east of Waco. Many fringe benefits: retirement, sick leave, vacation, 40-hour week, group insurance. Salary range $34,300 to $38,300 depending on qualifications. An equal opportunity employer. Contact Medical Director, Mexia State School, P. O. Box 1132, Mexia, Texas 76667. 817-562-2821.

NEEDED: SECOND ORTHOPEDIST to join 15 man multi-specialty group. Rotating coverage. Five weeks vacation. Malpractice insurance. Call 915-592-0201, ext. 1680, El Paso, Texas.

FAMILY PRACTITIONER NEEDED by multi-specialty group. Rotating coverage. Five weeks vacation. Malpractice insurance. Call 915-592-0201, ext. 1680, El Paso, Texas.

GENERAL PRACTICE: Extremely successful practice in community of 12,000; area of approximately 20,000 available within next two months. Physician can start practicing without cash outlay in fully equipped facility with business management and complete staff. Practice now sharing building with pediatrician but two practices are separate entities under one management. For information contact S. J. Ward, P. O. Box 743, Port Lavaca, Texas 77979.

VACANCY FOR INTERNIST OR GENERALIST. This position is on the medical staff of 408 bed hospital comprised of a hospital, nursing home care unit and domiciliary. Active medicine and surgical service with intensive care unit, respiratory care unit and outpatient treatment. Town of 8,000 located 65 miles northeast of Dallas. Salary based on education, experience and background. Paid vacation, sick leave, malpractice, life and health insurance. Interested physicians please write or call Chief of Staff, Sam Rayburn Memorial Veterans Center, Bonham, Texas 75418; telephone 214-583-2111, ext. 252. Inquiries confidential. An equal opportunity employer.

Situations Wanted

UROLOGIST, age 35, will complete 4-year program June 1977. Board eligible, available July 1977. Seeking solo, association leading to partnership or group practice in Texas. Please reply to Ad-693, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SEEKING LOCATION: 31 year old, US trained general surgeon, will be board eligible July 1977. Experienced in endoscopy. Prefer medium to small community. Available July 1977. 504-455-7499, or write Ad-694, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED, in late 30s, over 10 years experience with New York State Department of Mental Hygiene as a psychiatrist in various positions—clinical, teaching and administration. Seek solo or group multispecialty practice or salaried position in community mental health service or Texas State mental health department. Expect to get Texas medical license in June 1977. Available summer 1977. Please reply to J. Pingili, M.D., P.O. Box 14, West Brentwood, New York 11717; 516-231-4235 (contact between 8 p.m.-10 p.m.).

PATHOLOGIST—University trained AP/CP, to finish residency end of June. Desire position in private group or hospital practice. Special interest in cytology. National boards. AOA. Please reply to Ad-702, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED FAMILY PRACTITIONER plans to relocate, medium or small town, associate or exchange call with other physicians. Prefer not to do obstetrics or surgery, predominately office practice preferred. Please reply to Ad-704, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PSYCHIATRIST, BOARD ELIGIBLE, age 37, married. Passed Part I of boards. Desires to relocate in large urban area in Texas. Presently, chief psychiatrist in out-patient department with previous experience in in-patient, emergency, forensic and child. Prefer full-time position in CMHC, state or private hospital or clinic or established group. Contact Melvin W. Cohen, M.D., 681 Clarkson Avenue, Brooklyn, New York 11203; 212-467-8744.

ANESTHESIOLOGY. 32, board eligible. Texas State Board. Four years university training in all types of anesthesia (Baylor College of Medicine). Available from May 1977. Please reply to Jae Hong Yang, M.D., 300 East Mexia #7, Mexia, Texas 76667.

WANT TO RELOCATE to Dallas-Fort Worth or surrounding area within 100 miles as a pathologist (female and university trained). Will be available from July 1, 1977. Want work as a full time pathologist and also part time possible. Please reply to Ad-709, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST: 47 year old, board certified, AP-CP, native Texan. Presently lab director at 250 bed hospital. Desire to return to south or southwest. Excellent relationship with hospital administration and medical staff. References. Will furnish aggressive pathology service for progressive administration and medical staff. Please reply to Ad-713, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST—35, board certified AP-CP, FLEX, Texas Medical License under process. Planning to settle in Texas earliest opportunity. Seeking hospital based or group practice. Call 313-283-9172 after 5 p.m., or write Ad-718, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

MD—Graduate Ohio State University. Training and experience general medicine, allergy. Board certified anesthesiology. Interest is general adult medical practice with emphasis on pain problems. Solo or association. Prefer suburb of Dallas, Fort Worth, Austin, San Antonio, Houston or Corpus Christi. Please reply to Ad-716, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERESTED BOTH IN FAMILY PRACTICE AND PSYCHIATRY: Certified in psychiatry. Completed residency in 1969. Staff and practice since 1969. American physician recognition award 1977-1980. Continuing education Category I, 315 hours. Taking family practice board in Oct. 1977. Certified in psychiatry. Eligible in family practice. Interested in private practice, solo, partnership or group. Please reply to Ad-715, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EL PASO, TEXAS: General surgeon, 32. Board eligible. Moving to El Paso in July 1977. Wishes to associate with group or partnership. Contact Ruben G. Ramirez, M.D., 5910 San Bernardo Avenue, # 102, Laredo, Texas 78041: 512-724-2138.

GROUP PRACTICE: Experienced physician. Dallas or Houston. Available September/October 1977. Please reply to Ad-723, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST: Board certified in AP & CP, now associate pathologist in New York state hospital. Seeks position in hospital or laboratory in Texas. Licensed in New York (FLEX). Please reply to Saramma John, M.D., Laboratory, Central Islip State Hospital, Central Islip, New York 11722.

For Sale or For Rent

AUSTIN—NEW PROFESSIONAL PARK. Internist, GP, FP, Peds, OB/GYN sought to associate in group setting for solo practice. Physician population has not kept pace with accelerated growth. University town, new hospital. Call or write: Cannon Professional Park c/o 3913 Medical Parkway, Austin, Texas 78756. Telephone 512-451-8489.

NEW ULTRA-MODERN, cedar and glass office space for lease in Northwest San Antonio, one block from loop 410 and one exit from IH 10. Across the road from Park North Hospital, the building is divided into six separate office spaces, four of which are occupied by 4 general dentists, one orthodontist, and three oral surgeons. Up to 4700 sq. ft. available at 60c sq. ft. with a very liberal allowance to finish out to your specifications. Ideal situation for the family practitioner or pediatrician. Contact Mossrock Venture, 2803 Mossrock, Suite 201, San Antonio, Texas 78230.

GROWING NORTHEAST SAN ANTONIO, 55,000 population. No MDs. Five examining rooms, reception, large personal office, carpeted, air conditioned. Rent free details contact W. H. Gibson, 512-656-1166, night 512-651-6449.

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

AUSTIN—MODERN MEDICAL OFFICE SPACE—Professional building near Seton Hospital, Bailey Square Surgical Center, Medical Park Tower; on bus line. 512-478-5621. Sandlin & Company, 308 West 15th Street, Austin, Texas 78701. Nights and weekends call Merrill A. Phillips, CPM, 512-451-8035.

FOR SALE DUE TO DOCTORS DEATH. Modern 2,000 sq. ft. clinic. Combination EENT and allergy practice. Fully equipped office, waiting and exam rooms. Facility easily adaptable to other types of practice. Price and terms negotiable. Prospering East Texas rural area with drawing radius of approximately 90 miles. Dedicated patient load. Additional benefits. Contact Mrs. Albertine Dean, P.O. Box 1089, Crockett, Texas 75835; 713-544-3171.

FAMILY PRACTICE IN FORT WORTH: MD retiring due to health. Over 400 families in care. Outstanding quality office location in Park Hill area of city. Close to all hospitals. Practice, equipment and location lease for sale. Contact Knapp & Co., 1100 Ballinger, Fort Worth. Telephone 817-335-3414.

FURNISHED OFFICE FOR RENT: equipment for sale going concern. Fashionable area, North Dallas. Full adjoining lab facilities if wanted. Owner left town. Please reply to Ad-724, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN WANTED: Springtown, Texas. Urban community has medical clinic approved by state. Will build to suit the doctor. Service area has 38,000 people. 120 bed nursing home will be adjacent to clinic. Purchase or lease building. Flexible financing already approved. Area experiencing 48% growth rate, unlimited potential. A. G. Swan, P. O. Box 582, Springtown, Texas 76182.

X-RAY, (no fluoroscopy) and clinical laboratory facilities. Available for sale in fastest growing 1960FM area, Houston, Northwest suburb. Net income in excess of $25,000 in one year. Can sell one or combined. Please reply to Ad-714, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FOR SALE: UNIVERSAL GRENZ. Superficial radiation unit with table. Good condition. Used very litle. Contact Dr. Strickland, 6441 High Star Drive, Suite L, Houston, Texas 77074; phone 713-771-1777.

NEUROLOGY PRACTICE FOR SALE: Houston—Memorial area. Take over about July 1977. Gross $115,000 plus, past three years. 30 hour week, very low overhead, $50,000 accounts receivable, equipment, records, and furniture. Will introduce. No EEG, EMG or invasive procedures necessary. Will consider partner. Practice can easily be expanded to $200,000 year if desired. Wish to retire or do only part time. Cost $50,000, will negotiate. Call 713-464-8332, Monday through Fridays, 8:30 to 4:30.

SELL OR RENT AN ESTABLISHED and lucrative medical practice in Oak Ridge North on Highway 45. (Basically pediatric.) MD interested, contact 713-444-8909 and after 7 p.m., 713-273-1017.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

PHYSICIAN FINANCING BY MAIL. $5,000 to $50,000. All payments are 100% tax deductible. Can be used for any reason or purpose. For complete details in strict confidence write: Vern Britton, President, Financial Resources Co., Box 502-T, Richmond, Virginia 23204. Or call 804-262-5969.

ASPEN MUSHROOM CONFERENCE. Diagnosis and treatment of mushroom poisoning. Collection. Identification. Microscopy. Novice and advanced courses. AMA Category I. August 7-12. Hotel Jerome, Aspen, Colorado. Contact: Beth Israel Hospital, 1601 Lowell Blvd., Denver, Colorado 80204; 303-825-2190, ext. 354.

LYNN HOTEL, REDECORATED AND REMODELED. Next time in Dallas, try The Lynn Hotel, directly across from Baylor Hospital, 3401 Gaston Avenue. Call Ms. Marie Hamill, Manager, 214-824-6331.

Advertising Directory

American Physicians Insurance Exchange	19
Beltone Electronics	57
Beverly Hills Hospital	90
Comatic Laboratories	3rd Cover
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
Flint Laboratories	47-48
Gulf Coast Emergency Physicians	112
Insurance Corporation of America	99
Ives Laboratories	20
Mead Johnson Laboratories	4
Kelsey-Seybold Clinic	90
Eli Lilly and Company	38
Martin & Martin Associates	112
Medical Arts Clinic of Corsicana	101
The Medical Protective Company	112
Pennwalt Corp.	58-59
The Pharmaceutical Manufacturers Association	78-79
The Prudential Insurance Company of America	9
Roche Laboratories	1-2, 31, 66-67
Roerig & Co.	17, 76-77
Scott and White Clinic	Back Cover
Smith Kline & French	18
E. R. Squibb & Sons, Inc.	27-30
Starlite Village Hospital	117
Texas Bank and Trust Company	76
Texas Medical Association	
Automobile Leasing Program	5
Orient Adventure	12
Memorial Library Fund	96
Timberlawn Psychiatric Hospital	Back Cover
Torbet, Hutchins, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	101
Upjohn	60
Warner-Chilcot	116-117
Wichita Falls Clinic	117
Physicians' Directory	102-112
Classified Advertising	113-115

Publication of an advertisement in *Texas Medicine* is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

All oral bronchodilators are pretty much the same. Right? Wrong!

The difference is in their action—both before and after symptoms begin. That's the reason for TEDRAL®.

- ☐ effective and prolonged bronchodilation from the synergistic effect of ephedrine and theophylline
- ☐ β-ADRENERGIC ACTION RELAXES BRONCHIAL SMOOTH MUSCLE
- ☐ α-ADRENERGIC ACTION REDUCES BRONCHIAL EDEMA AND SECRETIONS
- ☐ dosage forms to meet individual patient needs

For proven performance...

Tedral® / Tedral® SA / Tedral® Elixir

Each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer), and 25 mg phenobarbital in the immediate release layer.

SUSTAINED ACTION

Each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine HCl, and 2 mg phenobarbital, the alcohol content is 15%.

See next page for brief summary.

WARNER/CHILCOTT
Division, Warner-Lambert Company
Morris Plains, New Jersey 07950

T-GP-72-B/W

TEDRAL®

TEDRAL® SA Sustained Action

TEDRAL® Elixir

CAUTION: Federal law prohibits dispensing Tedral SA without prescription.

Description. Tedral: each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Tedral SA: each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer); 25 mg phenobarbital in the immediate release layer.

Tedral Elixir: each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine hydrochloride, and 2 mg phenobarbital; the alcohol content is 15%.

Indications. Tedral, Tedral SA, and Tedral Elixir are indicated for the symptomatic relief of bronchial asthma, asthmatic bronchitis, and other bronchospastic disorders. They may also be used prophylactically to abort or minimize asthmatic attacks and are of value in managing occasional, seasonal or perennial asthma.

Tedral SA (Sustained Action) offers the convenience of b.i.d. dosage.

Tedral Elixir is convenient for persons who may have difficulty in swallowing tablets.

These Tedral formulations are adjuncts in the total management of the asthmatic patient. Acute or severe asthmatic attacks may necessitate supplemental therapy with other drugs by inhalation or other parenteral routes.

Contraindications. Sensitivity to any of the ingredients; porphyria.

Warnings. Drowsiness may occur. PHENOBARBITAL MAY BE HABIT-FORMING.

Precautions. Use with caution in the presence of cardiovascular disease, severe hypertension, hyperthyroidism, prostatic hypertrophy, or glaucoma.

Adverse Reactions. Mild epigastric distress, palpitation, tremulousness, insomnia, difficulty of micturition, and CNS stimulation have been reported.

Average Dosage. *Prophylactic or Therapeutic.*

Tedral: *Adults*—One or two tablets every 4 hours. *Children*—(Over 60 lb) one-half the adult dose.

Tedral SA: *Adults*—One tablet on arising and one tablet 12 hours later. Tablets should not be chewed. *Children*—Not established for children under 12.

Tedral Elixir: Note: One teaspoonful is equivalent to *one-quarter* Tedral tablet. *Children*—One teaspoonful per 30 lb body weight, every 4-6 hours, unless prescribed otherwise by physician. Should be given to children under 2 years of age only with extreme caution. *Adults*—One to two tablespoonfuls every four hours.

Supplied. Tedral: White, uncoated scored tablets in bottles of 24 (N 0047-0230-24), 100 (N 0047-0230-51) and 1000 (N 0047-0230-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0230-11).

Tedral SA: Double-layered, uncoated, coral/mottled white tablets in bottles of 100 (N 0047-0231-51) and 1000 (N 0047-0231-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0231-11).

Tedral Elixir: Dark red and cherry-flavored in 474 ml (16 fl oz) bottles (N 0047-0242-16).

STORE BETWEEN 59° and 86°F (15° and 30°C).

Full information is available on request.

Starlite Village Hospital

Center Point, Texas

Ph.: 634-2212
634-2213

- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

CHAMPUS APPROVED
JCAH: ACCREDITED.

Wichita Falls Clinic

501 Midwestern Parkway East, Wichita Falls, Texas 76302

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Clark W. Brazil, M.D.

GENERAL THORACIC AND VASCULAR SURGERY
Cecil H. Meares, M.D.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Richard H. Moore, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOLOGY AND RADIOACTIVE ISOTOPES
Thomas K. Bose, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
Joseph Bilder, Jr., M.D.
George W. Slaughter, M.D.

INTERNAL MEDICINE
P. K. Smith, M.D., F.A.C.P.
I. L. Humphrey, Jr., M.D.
Preston McCall, M.D.
Julian C. Sleeper, M.D., Cardiology
David M. Pogue, M.D., Cardiology
Wendell I. Wyatt, M.D.
Lowell L. Harvey, M.D.

FAMILY PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
James T. Cook, M.D.
Madeleine Kent, M.D.

UROLOGY
John C. Wurster, M.D.

OBSTETRICS AND GYNECOLOGY
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
James M. Missler, Administrator

Editorials

TEXAS MENTAL HEALTH CODE LACKS ADEQUATE EMERGENCY PROVISIONS

The involuntary hospitalization of a seriously mentally ill patient is a cumbersome procedure. There are many problems in the Emergency Admission Sections of the Mental Health Code.[1] The code is widely misunderstood, but physicians of all specialties need to become familiar with it because civil liberties are involved, and involuntary hospitalization-related problems are one of the main causes for malpractice suits' being filed against psychiatrists. Physicians, other than psychiatrists, have considerable exposure to suits because of their initial management of a seriously mentally ill patient.

First, Section 27 does not provide for a physician to have direct access to a magistrate to obtain a warrant for emergency admission. The physician must rely on the cooperation of a peace or health officer to request a warrant from a magistrate. Direct access to a magistrate is available only when the county judge is available and willing to accept an application for temporary hospitalization through different sections of the code (Sections 31, 66).[2]

Second, many peace officers are reluctant to initiate involuntary admission procedures because the code requires that officers state in writing their reasons for believing that a person is mentally ill (Section 28). Many officers fear liability because they lack the training to make judgments about the health of someone who may be mentally ill. As a result a patient often ends up in jail charged with a minor crime such as disturbing the peace.

Third, the availability of a knowledgeable magistrate at all times has become more important in light of a recent court decision that a patient must have as much freedom as his condition allows.[3] When any hospitalized patient with any kind of illness becomes a danger to himself or others, the magistrate's availability becomes crucial. If a patient needs to be detained when the county judge is not available, the emergency admission procedures requiring the health or peace officer to initiate the obtaining of a warrant must currently be followed to keep the dangerous patient hospitalized legally.

Fourth, receiving hospitals must be appropriately staffed so that the medical officer on duty can make an informed opinion (Section 28). Often the medical officer does not have sufficient information if the receiving hospital is a state hospital. The medical officer may be in training and insufficiently experienced to make a determination of the need for hospitalization, and admission may be refused.

Fifth, all too often the mentally ill person is jailed rather than hospitalized. Section 27 of the code prohibits jailing unless the county health officer has approved the detention facility as "specifically equipped and staffed to provide psychiatric care and treatment." Some counties have made progress in providing suitable detention facilities, but many have not.

As this editorial is being written, the Legislature is considering SB 182 and SB 183 by Sen Jack Ogg. Passage of SB 183, as amended to allow a physician direct access to a magistrate at all times, could help insure hospitalization of the patient. Passage of SB 182 would eliminate that part of Section 28 requiring written opinions of peace officers as to why the person "is mentally ill and likely to cause injury to himself or others if not immediately restrained." With a change in Section 28, the officer may be more likely to consider bringing the person to a hospital for evaluation.

Emergency admission of the seriously mentally ill occurs only when there is cooperation among peace officers, magistrates, physicians, and receiving facilities. The suicide rate in jails has been called epidemic by some.[4] Perhaps the suicide rate would fall if all cooperated and if pending legislation were passed. The seriously mentally ill patient should be treated just as would any other seriously ill patient; steps should be taken to insure hospitalization.

Robert L. Zapalac, MD, Austin.

References

1. Vernon's Annotated Civil Statutes, art 5547 (27) to 5547 (30).
2. Vernon's Annotated Civil Statutes, art 5547 (31) and 5547 (66).
3. *Dixon vs Weinberger* 495 F 2nd 202, 1974.
4. Cox M: Suicide jail hangings—near epidemic. *The Austin American Statesman* (April 4) 1976.

8 9661

THE LIBRARY
UNIVERSITY OF CALIFORNIA
San Francisco
THIS BOOK IS DUE ON THE LAST DATE STAMPED BELOW

7 DAY LOAN

7 DAY
DEC 12 1977
RETURNED
DEC - 6 1977
7 DAY
DEC 26 1977
RETURNED
7 DAY
1978
RETURNED
FEB 28 1978

7 DAY
JUL 18 1978
RETURNED
JUL 11 1978
7 DAY
AUG - 2 1978
RETURNED
JUL 26 1978

7 DAY
DEC 20 1978
RETURNED
DEC 18 1978

15m-6,'73(R176884)4315-A33-9

327243

Jul77

TexasMedicine

Near-drowning in children

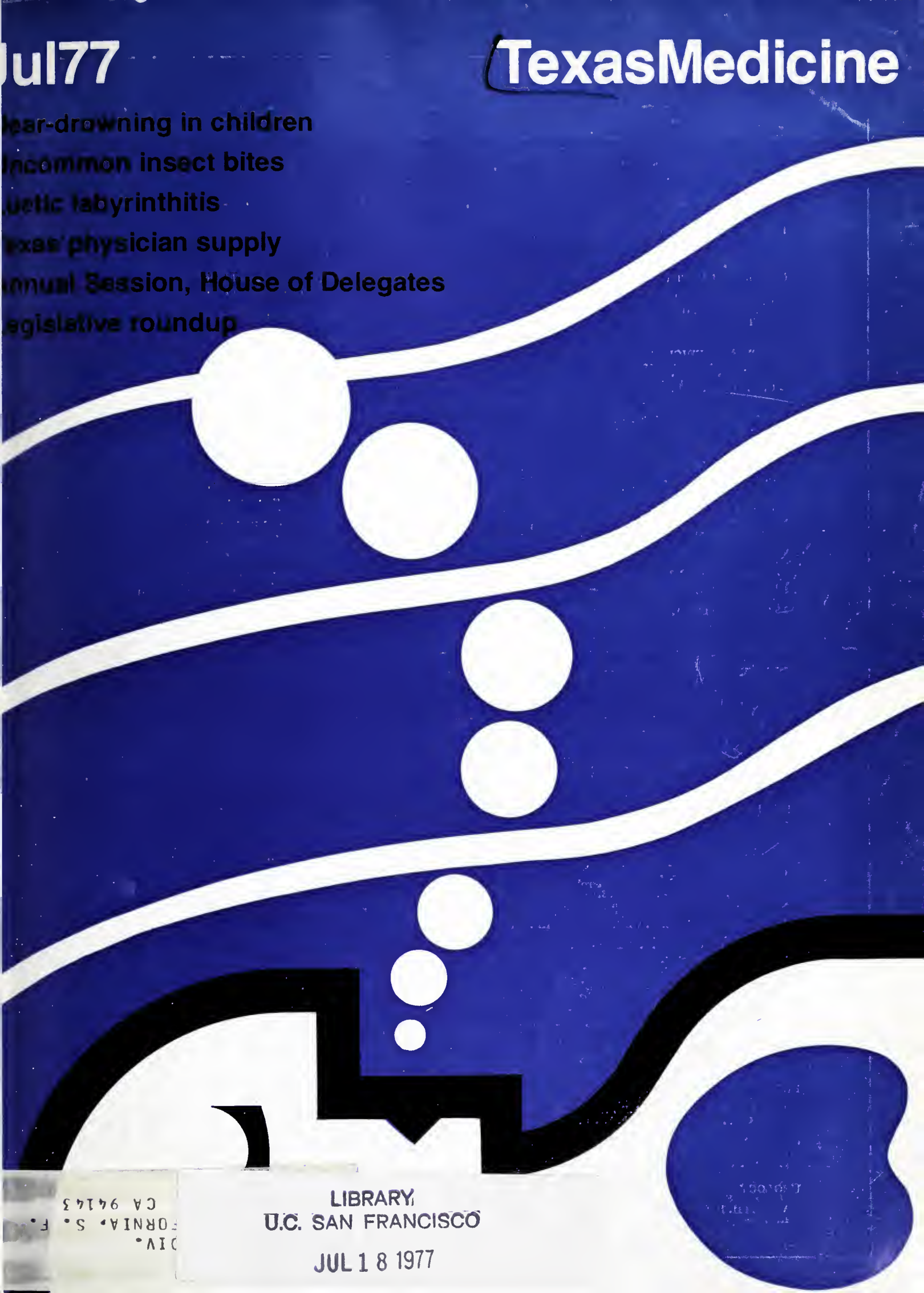
Uncommon insect bites

Cuetic labyrinthitis

Texas physician supply

Annual Session, House of Delegates

Legislative roundup



LIBRARY
U.C. SAN FRANCISCO
JUL 18 1977

Torbett-Hutchings-Smith Memorial Hospital
and Torbett-Hutchings-Smith Clinic

322 Coleman Street — Marlin, Texas 76661 — Telephone: 883-3561

Post Office Box 60

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.
Cecil A. McRee, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

VASCULAR SURGERY
Cecil A. McRee, M.D., F.A.C.S.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

TRAUMATIC AND ORTHOPEDIC SURGERY
D. R. Swetland, M.D., F.A.C.S.

ALLERGY
S. W. Hughes, M.D.

CARDIOLOGY
W. F. McKinley, Jr., M.D.

OBSTETRICS AND PEDIATRICS
William Pickvance, M.D.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
Ronald E. Henderson, Jr., M.D.
David M. McTaggart, M.D.
S. M. Bunn, Jr., M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

NEUROSURGERY
Harry H. Slade, M.D., F.A.C.S.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Associate Administrator:
Larry Parsons

Director-Coordinator, Nursing Service:
Vera Bee, R.N.

Director of Patient Care:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street — DALLAS, TEXAS 75211 — Telephone 823-4151

INTERNAL MEDICINE
John B. Allen, M.D., D.A.B.I.M.
Morris E. Magers, M.D., D.A.B.I.M.
Channing Woods, M.D.
Richard C. Stone, M.D., Gastroenterology
Landon W. Stewart, M.D., D.A.B.I.M.
Cloyce L. Stetson, Jr., M.D., D.A.B.I.M.
David S. Sowell, III, M.D., D.A.B.I.M., Cardiology
Don E. Cheatum, M.D., D.A.B.I.M., and D.A.B. Rhu, F.A.C.P., Rheumatology
W. Mark Armstrong, M.D., D.A.B.I.M.
Sam W. Waters, M.D.
George E. Thomas, M.D., D.A.B.I.M.
Steven P. Bowers, M.D., D.A.B.I.M.
Carlos M. Kier, M.D., D.A.B.I.M., Rheumatology

ORTHOPEDIC SURGERY
George S. Phalen, M.D., D.A.B.O.S., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
John B. Miller, III, M.D., D.A.B.O.G.
Vernie D. Bodden, M.D.

PEDIATRICS
Halcuit Moore, M.D., D.A.B.P., F.A.A.P.
P. E. Luecke, Jr., M.D., D.A.B.P., F.A.A.P.
Larry Gray, M.D., D.A.B.P., F.A.A.P.

GENERAL SURGERY
George P. Fosmire, M.D., D.A.B.S., F.A.C.S.
Miller S. Bell, M.D., D.A.B.S., F.A.C.S.

UROLOGY
Harry M. Spence, M.D., D.A.B.U., F.A.C.S.
William H. Hoffman, M.D., D.A.B.U., F.A.C.S.
Richard B. Dulany, M.D., D.A.B.U., F.A.C.S.

RADIOLOGY
Raymond W. Burford, M.D., D.A.B.R.
Joe B. Caldwell, M.D., D.A.B.R.
James B. Evans, M.D., D.A.B.R.

DERMATOLOGY
William N. New, M.D., F.A.A.D., F.A.C.P.

OTOLARYNGOLOGY AND OTOLOGIC SURGERY
D. W. Shuster, M.D., D.A.B.O.

OPHTHALMOLOGY
R. M. Burnside, M.D., D.A.B.O.
James M. Copps, M.D., D.A.B.O.

DENTISTRY AND DENTAL SURGERY
J. Boyd Hollabaugh, D.D.S.
William F. Walton, D.D.S.
George D. Blake, D.D.S.
Larry L. Cowsert, D.D.S.

ADMINISTRATION
C. H. Rosamond, Administrator
Jack Green, Associate Administrator

DIRECTOR OF NURSING SERVICE
Miss Billye J. Norris, R.N.

INACTIVE STATUS
George M. Underwood, M.D., D.A.B.I.M., F.A.C.P., Gastroenterology
William H. Potts, M.D., F.A.C.P., Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics and Gynecology
Adam D. Green, M.D., Surgery
B. Celia Slaughter, M.D., D.A.B.P., F.A.A.P.
John B. Bourland, M.D., D.A.B.O.G.

ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register,* 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older:

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see following page.

Her next attack of cystitis may require

the Bactrim™ 3-system counterattack

ROCHE

Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introital colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flora.

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.

Texas Medicine
VOL 73 JULY 1977

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION
Don G. Harrel, MD, Dallas
Chairman
Sam N. Key, MD, Austin
Vice-Chairman
Walter A. Brooks, MD, Quanah
Secretary
R. Harvey Bell, MD, Palestine
C. W. Yates, MD, Rosenberg
Paul R. Meyer, MD, Port Arthur
Merle W. Delmer, MD, San Antonio

TMA OFFICERS
John M. Smith, Jr., MD, San Antonio
President
A. J. Gill, MD, Dallas
Vice-President
Mylie E. Durham, Jr., MD, Houston
President-Elect
James G. Morris, MD, Lubbock
Secretary
Ben R. Keller, Jr., MD, Arlington
Treasurer
C. Lincoln Williston, Austin
Executive Director

EDITORIAL STAFF
1905 N Lamar Blvd, Austin 78705
Telephone: 512-477-6704
Marilyn Baker, Executive Editor
Rae Vajgert, Assistant Executive Editor
Elise David, Assistant Editor
Donna Billie, Editorial Assistant
Patty Mullins, Secretary

ADVERTISING STAFF
1801 N Lamar Blvd, Austin 78701
Jon R. Hornaday, Advertising Director
Anne Shelnutt, Advertising Manager

SCIENTIFIC PUBLICATION COMMITTEE
C. W. Daeschner, MD, Galveston
Chairman
Robert Askew, MD, Austin
Vice-Chairman
Ernest C. Butler, MD, Austin
Jesse D. Cone, MD, Odessa
Richard D. Cunningham, MD, Temple
George A. Gates, MD, San Antonio
Tracy R. Gordy, MD, Austin
David P. Green, MD, San Antonio
R. Maurice Hood, MD, Austin
Paxton H. Howard, Jr., MD, Temple
Daniel E. Jenkins, Jr, MD, Houston
Joseph Lancaster, MD, Austin
Francis E. McIntyre, MD, Austin
Paul C. Peters, MD, Dallas
H. Irving Schweppe, Jr., MD, Houston
Karen W. Teel, MD, Austin
Theodore P. Votteler, MD, Dallas

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104
SUBSCRIPTIONS
1801 N Lamar Blvd, Austin 78701
c/o Ray Riggs, Business Manager
$4 per year for members; $8 for non-members; $14 for foreign; $6 for libraries, hospitals, and universities; $4 for medical students. Single copy: $1.25.
CHANGE OF ADDRESS
1801 N Lamar Blvd, Austin 78701
c/o Edward R. Bierschenk, Membership Director
Copyright 1977 by the Texas Medical Association. Owned and issued monthly by the Association.
Second Class Postage paid at Fort Worth, Texas, under act of March 3, 1879. Publication number 796660.

Contents

Scientific Articles

39 Near-drowning in children Mason P. Gilfoil, MD; Hugo F. Carvajal, MD

45 Uncommon insect bites: the reduviid bite Glenn R. Hunt, MD

51 A current view of acute rheumatic fever William W. Pinsky, MD; Karen M. Pinsky, MPH; Dan G. McNamara, MD

56 Fever of unknown origin: a prospective study of 100 patients Paxton Howard, Jr, MD; H. Herbert Hahn, MD; Robert L. Palmer, MD; William J. Hardin, MD

60 Luetic labyrinthitis Jack D. Clemis, MD

68 Physician supply in Texas: an analysis Edward N. Brandt, Jr, MD, PhD

Features

76 TMA Annual Session brings 6,153 to Houston

82 Continuing medical education in Texas

Editorials

126 Decision on NHI issue was result of democratic process in action

News

7 TMA House of Delegates acts on health insurance and other issues

11 TMA House of Delegates elects 1977-1978 officers

11 Texas Legislature passes professional liability insurance legislation

14 Texas Legislature passes more than 25 bills affecting Texas medicine

16 Texas Tech opens new medical center

20 TMA Executive Board will meet July 10 in Austin

Departments

26 Capital Comments

28 Meetings

32 Continuing Education

75 Information for Authors

91 Medicine and the Law

94 Medical Newsmakers

96 Medicine and Literature

105 Deaths

125 Letters

On The Cover

Midsummer is a time for a cooling dip in the pool, the river, the lake, or the salty waters of the Gulf of Mexico. It is also a time when physicians are called upon to treat more people who nearly drown, and the article beginning on page 39 reviews treatment in 22 cases of near-drowning in children.

331065

Doctor, do you think your malpractice insurance premiums are too high?

Very likely you <u>are</u> paying more than you need to. Most insurance companies base their rates on nationwide experience — which includes parts of the nation with traditionally high losses. And, with the ordinary company, profits from underwriting, investments and reserves for unreported or unpaid claims are paid as dividends to their stockholders, not in savings to you!

BUT, NOT IF YOU INSURE WITH API!

API is a multiple-line Texas insurance company owned and controlled by the physicians it insures. ALL earnings — underwriting profits, investment income, unpaid reserves — are returned to members in reduced premiums and other benefits.

And that's not all. You'll have the advantage of a peer review group to screen out claim-prone applicants and provide claim review with defendant doctor and attorney. You'll get legal representation by a nationally recognized law firm with a history of successful, tough defense of malpractice suits.

You'll be protected by API's innovative policy which is designed to save you money. While it gives you the security of an occurrence-type policy form, you aren't charged for that expensive provision so long as you remain a subscriber. If, for any reason, the policy is terminated, then occurrence coverage is guaranteed indefinitely by the payment of only two moderate premiums — which are based on *actual* experience rather than estimates of future losses.

API has grown to nearly $1,000,000 in policyholders surplus — net worth. (Some companies advertise their total assets, which of course are meaningless until reduced by liabilities to arrive at net worth).

Doctor, find out how to join your colleagues who have learned the way out of the professional liability dilemma. Call or write today!

AMERICAN PHYSICIANS INSURANCE EXCHANGE

1400 FRITO-LAY TOWER • DALLAS, TEXAS 75235 • PHONE: (214) 350-6661

API is reinsured by one of America's largest reinsurance groups – rated A+XV by A.M. Best. (The highest rating available).

consider the effect on coexisting diabetes when you prescribe a vasodilator*

(POSTERIOR VIEW OF PANCREAS)

no interference in the management of the diabetic patient has been reported with

VASODILAN® (ISOXSUPRINE HCl)

the compatible vasodilator TABLETS, 20 mg.

*__Indications__: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg.(1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

Mead Johnson LABORATORIES

© 1977, MEAD JOHNSON & COMPANY, EVANSVILLE, INDIANA 47721 U.S.A. MJL5-4117R1

News in brief

TMA House of Delegates

The TMA House of Delegates adopted a resolution reaffirming sound guiding principles for evaluating National Health Insurance proposals and endorsed active participation of both the TMA and the AMA in National Health Insurance debate. In other action the delegates adopted a resolution which called television violence an environmental hazard and approved in principle steps proposed by the TMA Task Force on Access to Health Care to make medical care available for all Texans . . . 7

Professional liability insurance

The Texas House and Senate passed the conference committee report on professional liability insurance HB 1048 in the closing hours of the legislative session May 30 . . . 11

Medical legislative roundup

The Texas Legislature considered more than 800 bills relating to health or medical care in Texas during the legislative session . . . 14

Cost containment

"In our society, the solution to ill health depends first on individual responsibility; secondly, on some limited and specific public programs; and finally on private voluntary effort," John M. Smith Jr, MD, TMA president, said speaking to a conference on cost containment . . . 16

TMA Executive Board

Medical professional liability insurance, TMA organization, and computerized axial tomography will all be agenda items when the TMA Executive Board meets July 10 in Austin . . . 20

News in detail

TMA House of Delegates acts on health insurance and other issues

The Texas Medical Association House of Delegates considered National Health Insurance policies, use of Laetrile in cancer treatment, impaired physicians, and access to health care during the TMA Annual Session in Houston, May 11-15.

Five resolutions on National Health Insurance were considered by Delegates. Following much discussion at the reference committee hearing and on the floor of the House, delegates adopted a Council on Medical Legislation resolution calling on the House to reaffirm the sound guiding principles for evaluating NHI proposals which it previously adopted; to endorse active participation of both the TMA and the AMA in NHI debate; and urged TMA and AMA to strive to preserve private medical and health care and its financing by building upon the existing system of private health insurance with minimum federal involvement. The House instructed the AMA delegation to carry the resolution to the 1977 annual convention of the AMA in San Francisco.

The House of Delegates approved a resolution recommending that Laetrile not be used or prescribed by Texas physicians.

In other action, the House of Delegates approved in principle steps proposed by the TMA Task Force on Access to Health Care to make medical care available for all Texans. Delegates voted to approve in principle the concept that TMA undertake to develop and seek funding for an internal structure to provide assistance to communities in assessing their medical needs incorporating the TMA Placement Service. The group also voted to approve the concept of a comprehensive public education program describing physician recruitment approaches in specific communities and to provide printing for an auxiliary project to develop educational material pertinent to rural practice to be used for spouses.

The House approved a resolution opposing any educational and training programs which would compromise the quality of medical education, graduate medical education, and medical care.

Delegates approved three recommendations from the Committee on Health Care of the Poor to keep physicians in a firm leadership position in the health care delivery system. The committee expressed particular concern about lay organizations in South Texas that have plans to license various types of physician extenders to provide primary medical care.

The House asked the TMA and the Texas Medical Foundation to develop and perfect mechanisms and organizations of physicians, lay leaders, and health consumers that can accept funds from third parties and establish programs for delivery of a full spectrum of health care services in South Texas. The House asked that TMA request Gov Dolph Briscoe to appoint more physicians to the Greater South Texas Cultural Basin Commission.

Delegates supported the Board of Councilors' policy on separate billing for hospital-based physicians. The policy allows hospital accounting offices to provide billing services for collection of professional fees for hospital-based physicians, using guidelines for establishing legal and ethical practice. Separate arrangements to compensate physicians for administrative and/or educational responsibilities (training and supervision) are appropriate, providing that the compensation is commensurate for the time and amount of responsibility assumed in this position of the work of the hospital-based physicians.

Physicians and county medical societies have been encouraged to inform the Councilor and Vice-Councilor of their respective district of any problems encountered in implementation of the policy.

The delegates voted to support the Texas Congress of Parents and Teachers position on television violence, and adopted a resolution which called television violence an environmental hazard affecting the health of American children.

A resolution from the Council on Community Health Affairs was amended and adopted calling for TMA to support the Texas Attorney General's position opposing the ruling permitting publicly televised executions.

Delegates endorsed the goals of Immunization Action Month (IAM) and pledged continued

support and cooperation as a member of the IAM Steering Committee.

A Midland County Medical Society resolution was adopted asking TMA to actively support and encourage the training and utilization of registered nurse midwife practitioners working under the supervision of physicians and to oppose any action by the State Legislature to expand or endorse lay midwifery by nonmedical personnel. The Committee on Maternal and Child Health was asked to perform an indepth study of the effects of lay midwifery in Texas and to report findings to the Council on Medical Legislation for action.

After much testimony, with many diverse views, delegates adopted a resolution calling for the TMA to acknowledge the role of cigarette smoking as a public health problem affecting the smoker, the nonsmoker, and the young. TMA will also ask physicians to work for antismoking education within their local communities and strive to gain cooperation from other health-related professionals in antismoking efforts.

The Council on Medical Education and Hospitals submitted a resolution approved by the House pointing out that while interns, residents and fellows are employed as trainees by hospitals, such employment is primarily an education experience. The council stated that negotiations specified by the National Labor Relations Act (NLRA) would interfere with this education experience and is inconsistent with teacher-student relationship. The House voted to oppose passage of HR 2222, the Thompson bill, which would amend the NLRA and confer rights of labor unions upon formal housestaff organizations.

Delegates approved a Committee on Health Careers recommendation that physician's assistants, as presently defined by TMA and the State Board of Medical Examiners' Rules and Regulations, be accepted as a suitable and worthwhile member of the health care team.

A resolution from the Bexar County Medical Society calling for TMA to provide a category of membership, such as associate membership, for those interested hospitals and allied institutions in Texas was referred to the Council on Medical Education and Hospitals and to the Council on Constitution and Bylaws for study and reporting back at the 1977 interim session.

Although delegates did not adopt a resolution calling for unified membership in the AMA, delegates asked TMA and county medical societies to intensify their efforts to encourage all physicians to belong to and support the AMA.

A policy concerning patients in state mental hospitals and clinics was adopted. The policy calls for every patient entering the mental health system to be examined and diagnosed by a licensed physician who recommends the treatment program. The policy also states that

Wearing white hats, members of the Harris County delegation to the Texas Medical Association House of Delegates listen to debate during the TMA House of Delegates session.

THE ROMANS

HAD A PHRASE FOR IT...

CAVEAT EMPTOR

It's always wise to know what you buy....

THE TEXAS MEDICAL ASSOCIATION

takes pride in their insurance brochure which describes the various provisions of the Group Insurance Plans

TERM LIFE
LONG TERM DISABILITY
OFFICE OVERHEAD EXPENSE DISABILITY
PERSONAL ACCIDENT
and
MAJOR MEDICAL EXPENSE

Compare
DOLLAR for DOLLAR
BENEFIT for BENEFIT

Know what you are buying and then buy the plan most suitable to your needs.

Write for a detailed T.M.A. Insurance Brochure today

TEXAS MEDICAL ASSOCIATION

Insurance Service Office
1801 N. Lamar Blvd.
Austin, Texas 78701

Underwritten By ***Prudential***

hospitals and clinics should be organized so that each patient receives ongoing medical care, according to a treatment plan supervised by a licensed physician. Medical and other therapy should be prescribed and/or discontinued only by a licensed physician, according to the policy, and the physician rendering care is responsible for follow-up care of patients in his charge. In mental health facilities, the ultimate responsibility for patient care rests with the physician in charge. It is urgent for the welfare of those people who are mentally ill and are being treated in state hospitals and clinics of Texas that these minimum standards be implemented immediately, according to the policy.

The House approved appointment of an ad hoc committee by the president to define and clarify the authority to speak on behalf of the Association and to advise the House on the extent and type of negotiations program which should be undertaken. The committee was asked to report findings to the House at the 1977 interim session.

The House adopted the following policy regarding administrative charges for review of insurance cases: "It is not an unethical or inappropriate practice for any county medical society to make a reasonable charge per case to cover the administrative costs (clerical, duplicating, postage, etc.) for insurance claims submitted for Consultative (Peer) Review. Insurance companies are encouraged to reduce such costs by providing multiple sets of review documents on the cases submitted when requested by the reviewing county medical society."

L. S. Thompson, Jr, MD, TMA past president, left, congratulates John M. Smith, Jr, MD, TMA president, at the TMA Annual Session in Houston.

TMA House of Delegates elects 1977-1978 officers

John M. Smith, Jr, MD, San Antonio, was installed during TMA Annual Session as TMA president 1977-1978, and Dr and Mrs Mylie Durham were elected presidents-elect of the TMA and the TMA Auxiliary.

Dr Smith, a family practitioner, began working in organized medicine in 1954 as chairman of the Community Medical Services Committee of the Bexar County Medical Society.

He has served as president of the Alamo Chapter of the American Academy of General Practice, a member of the TMA Council on Medical Jurisprudence (now the Council on Medical Legislation), and a member of the Texas State Board of Health. He has also been a member of the TMA Board of Trustees, president of the Bexar County Medical Society, and a member of the American Hospital Association Committee on Physicians.

Dr Durham was president of the Harris County Medical Society in 1966. He was also the first physician member of the Harris County Hospital District's board of managers and later chairman. He is currently a member of the TMA delegation to the AMA.

Installed as president of the TMA Auxiliary was Mrs John C. Koch, Lufkin.

Other new TMA officers elected include A. J. Gill, MD, Dallas, vice president; James G. Morris, MD, Lubbock, secretary; Ben R. Keller, Jr, MD, Arlington, treasurer; Travis Smith, MD, Abilene, speaker; and Milton V. Davis, MD, vice-speaker.

Texas Legislature passes professional liability insurance legislation

The Texas House and Senate have passed and Gov Dolph Briscoe has signed the conference commitee report on professional liability insurance bill HB 1048.

Both houses passed the Medical Liability and Insurance Improvement Act of Texas in the closing hours of the legislative session May 30 and Gov Briscoe signed the bill June 16.

According to major provisions of the bill, damages are limited to $500,000 plus past and future medical expenses.

If for any reason the $500,000 limit is declared unconstitutional or stricken other than by legislative action, there would be a $150,000 limit on non-economic recovery such as pain and suffering, mental anguish, and disfigurement.

All liability limits will rise or fall with the consumer price index.

The statute of limitation is limited to two years from the alleged occurrence, except for minors under age 12 who have until age 14 to file a claim.

The Joint Underwriting Association is continued for two more years with permissible coverage limits raised to $750,000 per claim and $1,500,000 aggregate coverage.

The bill includes a bad faith cause of action section, very similar to the countersuit principle. The legislation instructs that if by 1979 the State Bar of Texas does not institute appropriate disciplinary measures against lawyers who file suits in bad faith, then the countersuit action section will be enacted.

Claims based on oral warranty of cure are eliminated. They must now be in writing.

The bill provides 60 days prior notice before a malpractice suit can be filed against a provider of medical services.

The bill prohibits placing a dollar figure in pleadings. This should reduce to some extent sensational publicity relating to filing of claims.

A formulary commission will be established to prepare forms for written verification of informed consent in most cases.

Protection is given to physicians under certain circumstances who come to the aid of an individual in a life-threatening emergency, regardless of the location, as long as it is not an ordinary physician-patient relationship and the physician neither receives, nor expects to receive, any remuneration.

The bill adopts the Medical Professional Li-

BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY

INPATIENT-OUTPATIENT

DEPARTMENT OF ADOLESCENT PSYCHIATRY

A Private 82 bed psychiatric hospital located in Oak Cliff on 18 acres amidst natural wooded surroundings. A multi-approach treatment center of neurologic and all psychiatric disorders. Treatment modalities include Somatic Therapy, Milieu Therapy, Chemotherapy, Individual and Group Therapy and Behavior Modification. Complete facilities for OT-RT under the direction of trained personnel. An individually directed program based on full diagnostic evaluation and actual performance administered by a staff skilled in special education and problems of the adolescent and young adult.

PSYCHIATRY

Jackson H. Speegle, M.D.
Fred H. Jordan, M.D.
Joseph H. Lindsay, M.D.
John T. Holbrook, M.D.

PSYCHOLOGY

George R. Mount, Ph.D.
Tom I. Payton, M.S.
Patrick R. Barnes, M.S.

DIRECTOR OF NURSES
Nita Ivey, R.N.

SOCIAL SERVICES
Beth Rutherford, M.S.W.

COURTESY STAFF

DIRECTOR OF EDUCATION
William E. Nix, Ph.D.

O.T. AND R.T. THERAPY
Director
Chequita Dian Badger, B.S.

1353 N. WESTMORELAND AVENUE, DALLAS, TEXAS 75211 **214 331-8331**

Combine Europe with a new Mercedes-Benz
. . . and SAVE $1,100 to $2,500.

Our new "Guide to European Delivery" booklet tells you all about one of today's true European travel bargains. It shows you how you can order your new Mercedes-Benz here and pick it up at the factory in Germany. Full factory-delivered price information lets you figure your savings for yourself. Clip this ad and send for your free "Guide" today.

Only Mercedes.

Intercontinental Motors

13915 I-45 North at Kuykendahl Road

Houston 77090 · 713/440-6300

Name _____

Address _____

City & State _____

Zip _____ Phone _____

ability Study Commission recommendation on medical discipline that gives the State Board of Medical Examiners more money, people, and power.

Professional societies of physicians which take certain formal disciplinary actions against a member relating to professional ethics, medical incompetence, moral turpitude or drug or alcohol abuse may report such to the State Board of Medical Examiners.

Physicians affected are entitled to review reports submitted to the State Board of Medical Examiners regarding their alleged incompetence.

According to provisions of the bill, any person providing information to a medical peer review committee and any member or employee of such committee is to be immune from civil liability.

The State Board of Medical Examiners is given additional power to deny a license to practice medicine and to discipline licensed physicians for various reasons, including failure to practice medicine in an acceptable manner, for having certain disciplinary actions taken against them by a professional medical association or licensed hospitals or for repeated or recurring meritorious health care liability claims which in the opinion of the Board evidence professional incompetence likely to injure the public.

The provisions of this act also provide that the State Board of Medical Examiners may temporarily suspend the license of a physician without notice or hearing provided the physician's practice constitutes an immediate danger to the public.

The bill provides that a reasonable number of district review committees of the State Board of Medical Examiners will be established. Each district will have a district review committee composed of three physicians, having a statutory term of six years. Each member will be subject generally to the law and rules of the State Board of Medical Examiners.

However, no district review committee will be able to exercise final authority over matters in which the State Board of Medical Examiners has jurisdiction. The State Board of Medical Examiners will make final disposition of all complaints against persons licensed by it and will have the sole authority to issue final orders, rules and regulations.

The legislation also permits advance payments to claimants without admitting liability.

The bill provides permanent, workable rate regulation by the Texas State Board of Insurance.

Insurance companies will be prohibited from assessing a premium surcharge against a physician merely because a claim was filed. Surcharges can still be assessed when payment is made in a case.

The legislation excludes medical malpractice cases from the Texas Deceptive Trade Practice Act.

The Texas Medical Association will be permitted to establish self-insurance trusts for its members.

Sen Ray Farabee, Wichita Falls, who sponsored the original TMA-supported professional liability legislation, said HB1048 ignored many of the recommendations of the Medical Professional Liability Study Commission. He said that the Texas Trial Lawyers Association had been unreasonable and had refused to compromise at all on many issues, when the TMA had made some compromises for the sake of producing a bill.

He said he feared that, without the recommendations such as collateral source and structured awards, little was passed that would help bring down malpractice insurance rates and solve the problems of availability of health care.

TMA president John M. Smith, Jr, MD, said that the conference committee version solved some technical problems of the House version of 1048. The committee bill still left out many study commission proposals that should not have been ignored after the Medical Professional Liability Study Commission spent 18 months studying the problem and producing a meaningful compromise recommendation. The bill made some progress, but should have done much more, Dr Smith concluded.

Texas Legislature passes more than 25 bills affecting Texas medicine

The Texas Legislature considered more than 800 bills relating to health or medical care in Texas during the legislative session and passed more than 25 bills affecting Texas medicine.

Several bills supported by TMA were passed including HB 1309 by Rep Jim Nugent, Kerrville. The bill requires physicians, dentists, podiatrists, veterinary medical doctors, and chiropractors who use outside laboratories to disclose on bills the name and address of the lab and the net amount paid for the test or test series.

TMA and the Texas Society of Pathologists supported the bill aimed at helping curb possible fraud. The bill was passed by both houses without a dissenting vote.

The legislature also passed SB 821 by Sen Pete Snelson, Midland, which fights sudden infant death syndrome. The bill lets the state pay for autopsies if a child under age 2 dies of unknown causes.

The Texas Department of Health Resources will develop a program for use by doctors, nurses, government agencies and others in counseling parents of sudden infant death syndrome victims. The bill is partially a result of a TMA House of Delegates resolution passed in November 1975.

Another TMA supported bill, HB 282, creates more family practice residencies. The bill gives the Coordinating Board, Texas College and University System, the power to contract with medical schools, licensed hospitals, and non-profit corporations to provide state funds for family practice residency training programs. Money was included in the appropriations bill in the amount of $852,700 for 1978 and $2,427,932 for 1979.

Also passed were two bills to increase the supply of corneal tissue available for transplants to save vision.

HB 307 authorizes justices of the peace and medical examiners to direct removal of the cornea in cases of accidental or unattended death where there is no protest during a four-hour period. HB 308 provides for training of morticians and others to remove the tissue and prepare it for delivery to hospitals.

Other bills that passed

HB 1574 by Rep Senfronia Thompson, Houston, makes the manufacture of Laetrile legal if it is done in accordance with the Texas Food, Drug and Cosmetic Act. Administrative procedures and possible court actions may delay actual manufacture, sale, and distribution to physicians as a prescription drug. The TMA House of Delegates passed a resolution in May 1977 urging doctors not to prescribe Laetrile in their practices.

The Natural Death Act, SB 148, by Sen Ray Farabee, Wichita Falls, will permit a patient to sign advance directives for the withdrawal of his own life support measure under certain terminal circumstances.

Professional liability insurance for University of Texas medical and dental students will be provided by a self-insurance mechanism created by Sen Kent Hance, Lubbock.

Another bill by Sen Farabee will permit only licensed child agencies who charge reasonable fees to be involved in the adoption process.

Another bill removes indication of legitimacy from birth certificates.

Sen Walter Mengden, Houston, sponsored successful legislation which permits medical personnel and private health care facilities to refuse to perform abortions.

A bill by Sen Hance aids hemophiliacs and establishes a Texas Department of Health Resources program to help hemophiliacs who cannot pay the entire cost of blood. Sen Hance sponsored other successful legislation that permits the state health department to establish a hypothyroidism testing program for infants.

Other new legislation will cut red tape if a doc-

tor wants to commit a patient to a psychiatric facility for 24 hours. If a health or peace officer or physician determines that a person is dangerous to himself or others, a magistrate can be asked to detain the person in a psychiatric facility for 24 hours.

Rep Nugent sponsored legislation that will permit County Commissioners to pay a reasonable fee to a physician for an autopsy.

Legislation by Sen Bill Moore, Bryan, changes the name of the Texas Department of Health Resources to the Department of Health. More legislation changes the Texas Department of Public Welfare to the Department of Human Resources.

Legislation by Sen Bill Braeklein, Dallas, prohibits discrimination against the mentally retarded in employment, housing, treatment, and other areas.

Rep Bob Vales, San Antonio, sponsored successful legislation that permits psychological services to be covered by health insurance policies.

A bill by Sen A. R. "Babe" Schwartz, Galveston, gives the State Rural Medical Education Board about $130,000 in extra funds.

The legislature also passed a bill replacing the electric chair with executions by injection.

Other bills that failed

HB 10 by Rep Mickey Leland, Houston, that would have permitted generic drug substitution by pharmacists, died in the Senate Human Resources Committee after being passed by the House. Another bill by Rep Leland, HB 13, applying generic prescribing to Medicaid/Medicare patients, died in the House Health and Welfare Committee.

HB 12 by Rep Leland, prohibiting distribution of complimentary samples by detail men unless they are pharmacists, died in the House Health and Welfare Committee.

A bill by Rep Leland that would have permitted optometrists to use diagnostic and therapeutic drugs died in the Senate Human Resources Committee after being passed by the House.

The Nurse Practice Act, SB 392, by Sen Tati Santiesteban, El Paso, was never considered by the full Senate. The bill would have revised current law by expanding the Nursing Board's composition and powers, creating mandatory continuing education, authorizing specialties such as nurse anesthetists and expanding the definition of nursing. The TMA testified for revision of the law but against some parts of the bill.

HB 227, by Rep Fred Head, Athens, that would have deleted part one of the National Boards test as a prerequisite for the Fifth Pathway training program for foreign medical graduates, was never voted on by the House.

Several bills that would have established or supported new medical schools at Prairie View A&M, Tyler, El Paso, Texas Woman's University, and the Rio Grande Valley were unsuccessful. The TMA and the Coordinating Board, Texas College and University System, testified on several occasions that before any new medical schools are created more family practice and primary care residencies should be created and the existing medical schools should be fully funded.

Rep Head's several bills that would have required doctors to practice in a rural or underserved area in Texas for a time after Texas medical school or residency training died in the House Higher Education Committee.

Bills to license clinical laboratory personnel, marriage and family counselors, social workers, and clinical counselors all failed to pass.

A bill by Rep Chris Miller, Fort Worth, that would have required regulation and registration of midwives, never got out of committee.

A bill by Rep Tim Von Dohlen, Goliad, defining fetal viability at 22 weeks and making it a crime to perform an abortion after that time under most circumstances, did not get out of the Senate Jurisprudence Committee. The Attorney General ruled that the bill had several constitutional flaws.

SB 60 providing more money to Texas medical teaching hospitals, failed when the Senate refused to accept a conference committee report in the closing hours of the session.

A bill by Sen Chet Brooks, Pasadena, would have permitted the state to pay the Texas Chiropractic College for some tuition and other costs. The bill died in the Senate Education Committee.

SB 601 by Sen Gene Jones, Houson, would have mandated forcibly the inclusion of chiropractic services in all health insurance policies. TMA opposed the bill which died in the Senate Human Resources Committee.

SJR 39 by Sen Carl Parker, Port Arthur, would have let the state pay into a fund for physicians' and hospitals' malpractice insurance. TMA objected to the stringent state regulations included in the bill.

A bill by Sen Lloyd Doggett, Austin, that required new buildings to have adequate entry facilities for the handicapped, did not get out of committee.

Another proposed by Rep Jim Clark, Pasadena, permitting alcoholism treatment to be covered by health insurance policies, died in committee.

TMA supported stricter regulation of ambulances and attendants when it testified in favor of HB 299. The bill, which also exempted ambulances serving counties under a certain size, died in committee.

TMA president addresses cost containment conference

"In our society, the solution to ill health depends first on individual responsibility; secondly, on some limited and specific public programs; and finally on private voluntary effort," John M. Smith, Jr, MD, TMA president, said, speaking to a conference on cost containment and health planning in Dallas in June sponsored by the Department of Health, Education, and Welfare Region 6.

"In 1975, we spent $26.5 billion for Medicare and Medicaid—but, we spent over $30 billion for cigarettes and whiskey . . .

"Remember, 99% of us are born healhy. Bad health is a product of neglect, ignorance, self-indulgence and lack of discipline, and in some cases—plain bad luck. In short, most of our health problems we bring upon ourselves, and the sad truth is that no medical system is going to be very successful in preventing illness if the individual does not take proper care of himself.

"As health individuals involved in health planning," Dr Smith told those attending the conference, "you must, I believe, confront the basic problem—health education from infancy to old age. You will not be successful in developing a more effective health system, if all of the influences on health are moving in irrational and detrimental ways."

Medical care costs have to be considered with at least two other equally important factors—the accessibility of medical care to the whole population and the quality of medical care given, Dr Smith said.

Medical insurance and especially government medical insurance have vastly widened access, he said, but as a 1976 General Accounting Office study points out, the biggest contributors to rising health care expenditures are inflation, sharp increases in the number of persons included within government programs, and the expansion of technology.

Texas Tech opens new medical center

Dedication and ribbon cutting officially opened the new Texas Tech University School of Medicine (TTUSM) in Lubbock June 5.

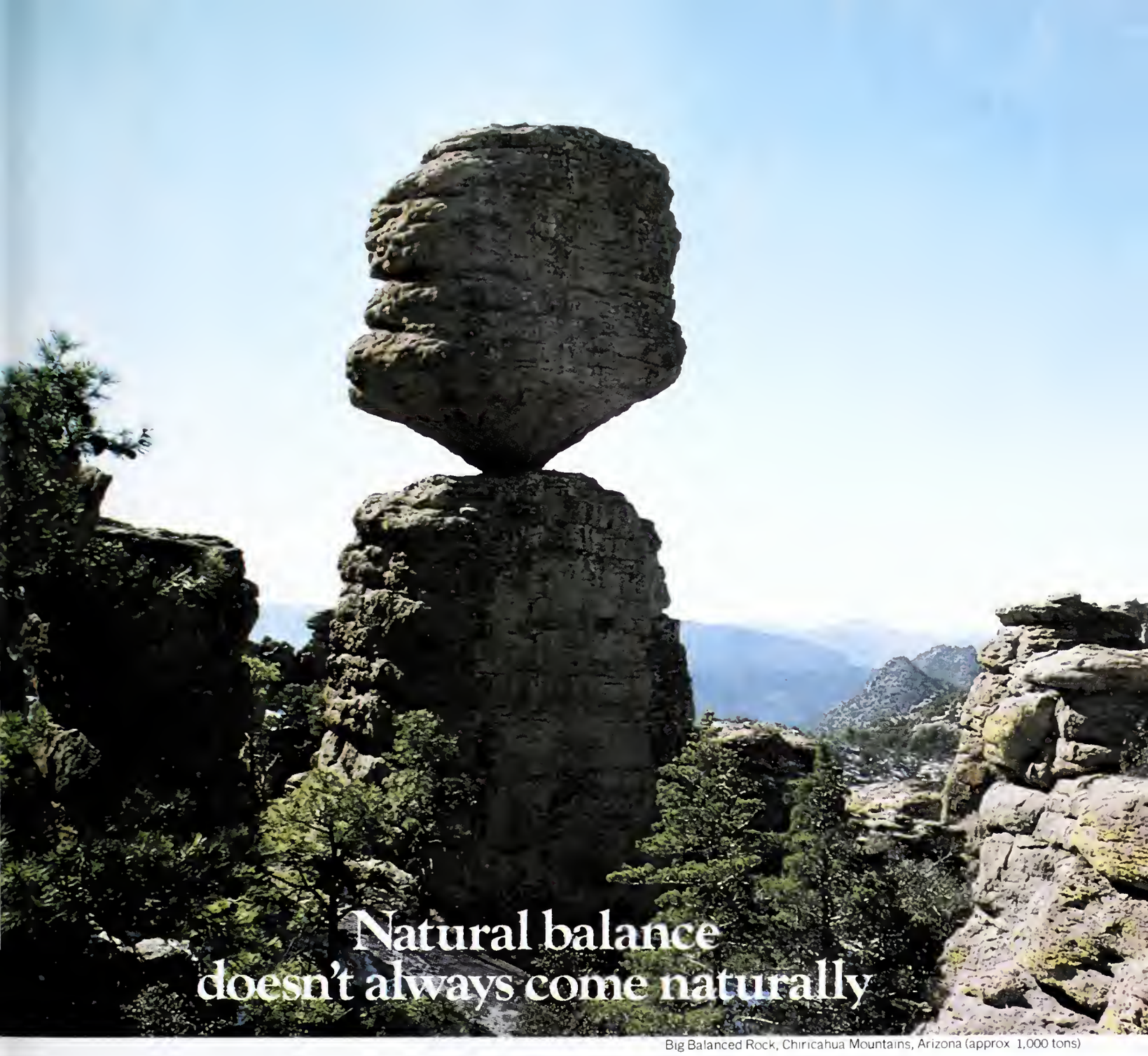
Gov Dolph Briscoe dedicated the complex.

The $40 million medical structure is presently complete on the exterior, but only 40% of the interior is finished.

Another 10% will be completed by August 1978. The remainder of the building will be completed in pace with the needs of the school. The building encompasses 811,417 gross square feet.

The enabling legislation that created TTUSM in 1969 said the school would open regional academic health centers in Amarillo, El Paso, and the Permian Basin, and establish academic headquarters in Lubbock.

The centers are now operating in Amarillo and El Paso. Negotiations to establish the Permian Basin center are now underway.



Big Balanced Rock, Chiricahua Mountains, Arizona (approx 1,000 tons)

■ **Most Widely Prescribed**—Antivert is the most widely prescribed agent for the management of vertigo* associated with diseases affecting the vestibular system such as Menière's disease, labyrinthitis, and vestibular neuronitis.

■ **Relief of Nausea and Vomiting**—Antivert/25 can relieve the nausea and vomiting often associated with vertigo.*

■ **Dosage for Vertigo*** —The usual adult dosage for Antivert/25 is one tablet t.i.d.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

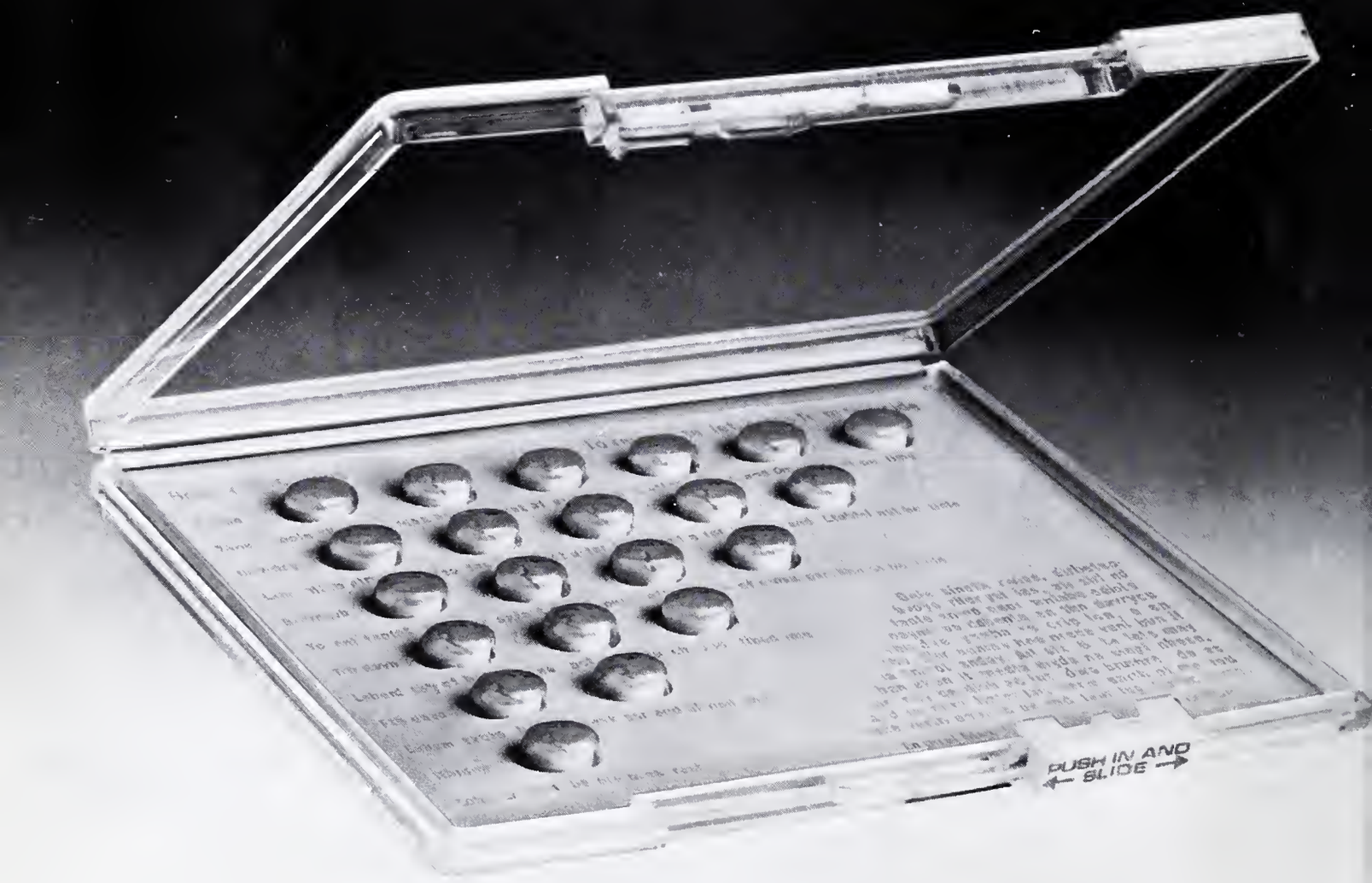
Upjohn

The Upjohn Company, Kalamazoo, Michigan 49001

Medrol® 4 mg Dosepak*

methylprednisolone, Upjohn

The explicit printed dosage instructions that accompany each Dosepak make it easy for the patient to understand and follow the dosage regimen.



*Trademark

J 5741-4

©1977 The Upjohn Company

AMA releases study of jail inmate health

Inmates in the nation's jails exhibit an alarming incidence of communicable diseases, according to an inmate patient profile completed by the American Medical Association.

Examination of 641 prisoners in the AMA's jail health care project, revealed that 12.9% had positive test results for tuberculosis, 5.9% had positive results for syphilis, and 30% had results indicative of liver malfunction, pointing to the possibility of hepatitis.

This high incidence of disease is especially disturbing because of the over-crowding common to US jails. Since many inmates are released within a short time of apprehension, their exposure to disease endangers the general population.

The inmate patient profile, which defines the problem for the first time, is an essential part of the AMA program to upgrade the medical care provided in American jails. The program, funded by the Law Enforcement Assistance administration, has already produced a preliminary standard of medical care which is being implemented in the 30 jails participating in the AMA program.

Because of insufficient medical care which most inmates have during their lives—15% of those surveyed never had a physical examination, 16% had never been to a dentist, and 26% had never had their eyes examined—the inmates had a high percentage of unattended medical problems.

The AMA data show that 90% of the inmates surveyed had at least one medical complaint and in 60.9% of those cases recommendations were made by the examining health professional that follow-up care was necessary.

The need for the AMA project has been underscored by the number of lawsuits by inmates which cite the lack of medical care as evidence of cruel and inhuman punishment. Less than 50% of the jails originally surveyed by the AMA in 1972 provided a regular sick call, and only 17% held sick call on a daily basis. Of those jails surveyed, 27% had no emergency equipment at all, and 6% did not even have a first aid kit.

Unlike the federal system of penal institutions, US jails have been inadequate, medically for years. The legal need for upgrading the nation's jails has been spelled out by three booklets produced by the AMA jail project.

One, *Constitutional Issues of the Prisoners' Right to Health Care,* documents the constitutional right of a prisoner to adequate medical treatment.

Another, *Legal Obligations to the Pre-Trial Detainee,* explores the rights of pre-trial detainees who must be given all due-process rights as non-prisoners, and who must have his health and well-being provided for and must, in fact, be accorded all the rights of a citizen.

A third, *Allied Health Personnel in Jails,* reviews the involvement of non-medical jail personnel in the delivery of medical care. These people can impede the delivery of health care, such as a guard deciding that a prisoner is malingering and not calling a physician.

The need for improvement of medical care, says AMA jail project director Joseph Rowan, goes beyond the legal niceties. "When a society removes the right of a person to be self-sufficient, then it must provide him or her with the basics of life."

Royal College of Physicians celebrates Harvey anniversary

In celebration of the 400th anniversary of the birth of William Harvey, the Royal College of Physicians of London is sponsoring a symposium in London July 9-13, 1978.

The scientific program will include a half day meeting on William Harvey, the man and his work, and a 2½ day symposium with invited speakers about modern methods of studying the circulatory system.

For more information contact Mildred Robertson, UT Medical Branch, Galveston, Texas 77550.

"Superwoman" physicians handle patients, family

"Superwoman" is the name for the woman physician who cares for her patients while also playing the traditional roles of wife and mother, says a report in the June 6 *Journal of the American Medical Association.*

Marilyn Heins, MD, of Wayne State University School of Medicine, Detroit, reports on a continuation of her studies in productivity of women and men physicians.

Dr Heins concludes that there has been an increase in productivity of women physicians in the past 10 to 20 years, at the same time more of the women in medicine married and had children.

"Increased productivity in the face of greater family responsibilities seems to illustrate the 'superwoman' role that many women physicians play," says Dr Heins.

Dr Heins studied the working habits of groups of men and women doctors, and determined that women physicians work nearly 90% as much as do men physicians. The difference is largely due to time out for child bearing and child rearing by the women doctors, she says.

At the time of the survey 96% of the men and 84% of the women were working at the practice of medicine. Most of those of both sexes not working were ill or retired. Only 7% of the nonworking women physicians were not working for reasons related to the traditional female role: marriage, child birth, or child rearing.

TDHR reports 12 tetanus cases in Texas in 1976

Twelve cases of tetanus were reported in Texas in 1976, according to the Texas Department of Health Resources (TDHR).

The fatalities included a one-month old female, and two males, ages 56 and 86 years. Two of the survivors were males and seven were females.

Since there is no naturally acquired immunity to the tetanus organisms, TDHR urges adults to obtain proper immunization and boosters taken at 10-year intervals and when indicated as part of wound management.

CHAMPUS regulation manual available from Government Printing Office

Copies of the new regulations governing the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) are now available to the general public through the Government Printing Office at $4.25 each.

To obtain a copy, write to the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, and ask for "Civilian Health and Medical Program of the Uniformed Services (CHAMPUS)," Stock No. 008 001 00102-9. Each request must be accompanied by a check or money order for $4.25 per copy made payable to Superintendent of Documents.

TMA Executive Board will meet July 10 in Austin

Medical professional liability insurance, TMA organization, and computerized axial tomography will all be agenda items when the Texas Medical Association Executive Board meets July 10 in Austin.

During the meeting board members will consider the entire spectrum of medical professional liability insurance and review the major provisions of HB 1048, the Medical Liability Insurance Improvement Act of Texas, passed by the 65th Session of the Texas Legislature.

Board members will review opportunities for implementing and following through on various provisions of the professional liability legislation and consider establishment of a program of professional education aimed at reducing the physician's exposure to professional liability.

Board members will also receive a progress report from the TMA Ad Hoc Committee to

TETANUS CASES IN TEXAS IN 1976

	-1	1-5yr	6-19yr	20-39yr	40-59yr	60plus	TOTAL
Cases	1	1	0	0	4	6	12
Fatalities	1	0	0	0	1	1	3
% Fatal	100%	—	—	—	25%	17%	25%

Study the Association's Structure and Function and hear a report and recommendations of the TMA Ad Hoc Committee on Computerized Axial Tomography.

The TMA Ad Hoc Committee to Study the Association's Organizational Structure and Function will meet July 8-9 at the Austin Hilton Inn.

The TMA Council on Tax-Financed Health Care will meet July 9 at the Austin Hilton Inn.

AMA Section on Medical Schools meets in June in San Francisco

The newly created AMA Section on Medical Schools met for an organizational meeting during the American Medical Association meeting in San Francisco June 18-23.

Representatives from each Texas medical school were scheduled to attend the organizational meeting. Representatives included Frederick J. Bonte, MD, Vernie A. Stembridge, MD, Albert D. Roberts, MD, and Edward R. Johnson, MD, from The University of Texas, Southwestern Medical School in Dallas; George T. Bryan, MD, Edward N. Brandt, Jr, MD, David Eiland, Jr, MD, and August Ray Remmers, Jr, MD, from The University of Texas Medical Branch in Galveston; William T. Butler, MD, Major W. Bradshaw, MD, Edward C. Lynch, MD, and Fred M. Taylor, MD, from Baylor College of Medicine in Houston; Robert L. Tuttle, MD, James H. Dukem Jr, MD, Thomas S. Harle, MD, and R. Rodney Howell, MD, from The University of Texas Medical School at Houston; Stanley E. Crawford, MD, Timothy N. Caris, MD, Ulric J. Laquer, MD, and Charles E. Gibbs, MD, from The University of Texas Medical School at San Antonio; Joyce Davis, MD, and Kermit Knudsen, MD, from the Texas A&M University College of Medicine in College Station; and George S. Tyner, MD, Anthony Way, MD, James Burkeholder, MD, and William Holmes, MD, from the Texas Tech University School of Medicine in Lubbock.

TTUSM physiology department receives research support

Research funds totalling $368,885 have been awarded to two members of the Department of Physiology faculty at Texas Tech University School of Medicine (TTUSM) in Lubbock.

Charles D. Barnes, PhD, professor and chairperson of the Department of Physiology, has received a $248,990 National Research Service Award from the United States Public Health Service. Maysie J. Hughes, PhD, associate professor in the Department of Physiology has received grant funds from the National Heart and Lung Institute in the sum of $119,895.

The funds awarded to Dr Barnes are to be used over the next five years in studies of factors modifying cardiovascular activity. Laboratories under Dr Barnes' auspices will explore neural, hormonal and other factors affecting the cardiovascular system.

The funds are to be used primarily to support pre and post doctoral trainees in the research laboratories of the Department of Physiology.

The grant given to Dr Hughes will be used over the next three years to continue her work on the cardiac (heart) histamine receptor.

TDHR offers assistance with immunizations

The Immunization Division staff of the Texas Department of Health Resources is available to support physicians in improving immunization levels among Texas preschool and school children.

This includes assistance in planning and organizing additional clinics (or extending the hours of operation of existing clinics), or aiding physicians in conducting local promotional and motivational programs.

If help is needed, contact the Texas Department of Health Resources, 1100 West 49th, Austin, Texas 78756, telephone 512-458-7284.

Do you think enough of your employees to provide the best?

You might get other group health insurance at lower rates. But in a dollar-for-dollar comparison, there are three simple reasons why Blue Cross and Blue Shield coverage is better:

1. It returns more of its premiums in claim payments to policyholders than most other major insurance companies.
2. And it doesn't set maximum dollar limits on most hospital services.
3. The Blue Cross and Blue Shield ID card admits members to most hospitals anywhere in the country, as simply as possible.

Blue Cross and Blue Shield coverage means a lot to your employees. And it shows *they* mean a lot to you.

Blue Cross
GROUP HOSPITAL SERVICE, INC
Blue Shield
GROUP LIFE & HEALTH INSURANCE COMPANY
of Texas

®, Registered Mark Blue Cross Association
®, Registered Service Mark of the National Association of Blue Shield Plans

Rabies in Texas increases to 345 cases in 1976

Rabies in Texas showed a slight increase to 345 laboratory confirmed animal cases in 1976, the Texas Department of Health Resources (TDHR) reported after compiling its 12-month statistics. This compares to 329 cases in 1975.

The largest number of cases, 289, was found in wildlife, but 41 pet animals, 28 dogs and 13 cats, were confirmed as rabid, according to the TDHR Bureau of Veterinary Public Health.

This represents a slight decrease in pet rabies, since 45 pets were infected with rabies in 1975.

In wildlife, skunks led the rabies list during 1976 with 205 of the 289 confirmed cases in wildlife.

Other wildlife helping account for the rabies total included bats, foxes, raccoons, and coyotes. No bobcat cases occurred, and the coyote case was the first confirmed in that species since 1973.

Fifteen cases of rabies were confirmed in livestock. Cattle accounted for eight cases and equines the remaining seven cases.

The TDHR laboratories examined 7,566 specimens from 46 different animal species in diagnosing the 345 rabid animals.

The rabies cases occurred in 93 counties representing all areas of Texas, but most cases occurred in the eastern half of the state.

AMA contributes $5,000 to UT to benefit Nelson Scholarship Fund

The Board of Trustees of the American Medical Association and the Board of Directors of the American Medical Association Education and Research Foundation have contributed $5,000 to the University of Texas to benefit the Joseph T. Nelson Scholarship Fund.

Dr Nelson, a member of the TMA Board of Trustees, the AMA Board of Trustees, and the University of Texas Board of Regents, died in April.

Coming next month

Scientific articles scheduled for August are on fractures of the femoral neck, muscle biopsy histochemistry, technetium-99m stannous pyrophosphate myocardial scintigraphy, the minimal care concept in arthritis, and the activity of rheumatoid arthritis during pregnancy.

Investment performance for TMA Members' Retirement Plan and Trust

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1977 Through 5/31	3 Years Ended 12/31/76	5 Years Ended 12/31/76	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	− 8.8%	− 9.3%	− 8.3%	1.8%
Loomis-Sayles Mutual Fund	− 9.3%	− 1.6%	− 4.4%	3.4%
Mercantile Bank Equity Fund	−11.4%	+ 5.9%	−17.8%	4.2%
Mercantile Bank Fixed Income Fund	− 1.9%	+ 0.2%	− 5.5%	7.5%
T Rowe Price Growth Stock Fund	−15.5%	− 2.6%	−16.6%	2.4%
T Rowe Price New Income Fund	− 1.8%	+ 2.7%	N/A	7.8%
Stein Roe & Farnham Balanced Fund	−10.0%	− 0.5%	− 2.7%	3.3%
Standard & Poor 500 Stock Average	−10.6%	+10.4%	+ 5.3%	—
Dow Jones Industrial Average	−10.5%	+18.1%	+12.9%	—

*Includes reinvested capital gains distributions.

NOW—the only publication you need to read to keep you up-to-date in the important field of medical malpractice and all other areas of professional liability.

Every month in *Medical Liability Advisory Service* you will receive up-to-the-minute information on:

1. Malpractice litigation — suits, settlements, verdicts, attorneys involved and *professional testifiers*;
2. Countersuits—suing the people who sue you — we call this column "Fighting Back";
3. Legislation—state and federal;
4. Information on insurance companies — their financial condition, available markets;
5. Plans and solutions to the malpractice problem—insurance programs, self-insurance, no insurance;
6. What the plaintiff attorneys are doing in Texas and around the nation.

All this and much, much more. Many of your colleagues in Texas are enthusiastic subscribers to Medical Liability Advisory Service. We are now in our second year. Write today for a free sample copy to see how this will benefit you every day in your practice.

Medical Liability Advisory Service
P. O. Box 35813
Houston, Texas 77035

Please send me my sample copy of MLAS so that I can judge for myself whether it will benefit me in my practice.

Name:_____

Address:_____

City and State_____ Zip_____

Which iron would you rather be using this weekend?

An investment in a large piece of land requires time and experience to make it a wise and profitable venture. Time and experience that you may not have. For 16 years, Chaparrosa Agri-Service has profitably run a 70,000 acre Texas ranch. And Chaparrosa Agri-Service is noted for management in international ranching operations.

Complete management. Experience. Expertise. For a fee, Chaparrosa Agri-Service can ensure your investment is well protected. For a brochure describing our complete Agri-Service Program, phone or write:
Dudley T. Campbell, President
2000 NBC Building, San Antonio, Texas 78291 (512)227-5101

J3 Chaparrosa Agri-Service

2000M

Wichita Falls Clinic

501 Midwestern Parkway East, Wichita Falls, Texas 76302

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Clark W. Brazil, M.D.

GENERAL THORACIC AND VASCULAR SURGERY
Cecil H. Meares, M.D.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Richard H. Moore, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOLOGY AND RADIOACTIVE ISOTOPES
Thomas K. Bose, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
Joseph Bilder, Jr., M.D.
George W. Slaughter, M.D.

INTERNAL MEDICINE
P. K. Smith, M.D., F.A.C.P.
I. L. Humphrey, Jr., M.D.
Preston McCall, M.D.
Julian C. Sleeper, M.D., Cardiology
David M. Pogue, M.D., Cardiology
Wendell I. Wyatt, M.D.
Lowell L. Harvey, M.D.

FAMILY PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
James T. Cook, M.D.
Madeleine Kent, M.D.

UROLOGY
John C. Wurster, M.D.

OBSTETRICS AND GYNECOLOGY
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
James M. Missler, Administrator

CAPITAL COMMENTS

WASHINGTON: HOSPITAL COST CONTAINMENT. The American Medical Association has joined the American Hospital Association and others in opposing HR 6576, the Hospital Cost Containment Act of 1977. Edgar T. Beddingfield, Jr, MD, chairman of the AMA Council on Legislation, told the Subcommittee on Health of the House Ways and Means Committee and the Subcommittee on Health and Environment of the House Interstate and Foreign Commerce Committee that ". . . the bill, as proposed, does not support incentives for efficiency, perpetuates inefficiency in hospital care, creates a rigid program which in the long run would be unresponsive to improving quality of hospital care, discourages increased access to care, and penalizes institutions which seek to respond to increased community health needs."

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber, Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

WASHINGTON: NATIONAL HEALTH INSURANCE. The Administration's National Health Insurance plan will go to Congress next year, HEW Secretary Joseph Califano told the first meeting of the NHI Advisory Committee in May. He said it will be universal and mandatory, phased in over a number of years, and with a special commitment to preventive care, especially for children.

AUSTIN: SPECIAL SESSION. Gov Dolph Briscoe will summon the Texas Legislature into special session July 11 to pass public school finance legislation. It is expected that no medical issues will be considered.

AUSTIN: BOARD OF MENTAL HEALTH AND MENTAL RETARDATION. Walter A. Brooks, MD, Quanah, and Olin B. Gober, MD, Temple, have been reappointed by Gov Dolph Briscoe to the State Board of Mental Health and Mental Retardation for 6-year terms to end in 1983. Mrs A. I. Thomas, Prairieview, was appointed to replace O. J. Baker on the board.

AUSTIN: TEXAS STATE BOARD OF MEDICAL EXAMINERS. A. Bryan Spires, MD, Austin, Max C. Butler, MD, Houston, James Russell Winn, MD, Uvalde, and L. G. Ballard, DO, Granbury, have been appointed by Gov Dolph Briscoe to the Texas State Board of Medical Examiners to 6-year terms to expire April 13, 1983.

AUSTIN: HEALTH ADVISORY COMMITTEE. Cyrus Cathey, MD, Hamilton, was reappointed to a 3-year term to expire Sept 1, 1979 on the Health Advisory Committee of the Texas Department of Health Resources by Gov Dolph Briscoe.

WASHINGTON: DOCTOR FEES. Testifying before the Subcommittee on Health of the Senate Finance Committee, HEW Secretary Joseph A. Califano stated that physician fees, like hospital costs, eventually may need cost controls. "Eventually the health care system will have to deal with physician's fees." The Secretary stated that he and President Carter had considered controls on physician's fees earlier this year but rejected them ". . . because we just don't know yet how

to deal with that problem." He promised that he would send a specific recommendation to the Congress on the matter of physician's fees.

NEW MEXICO: PHYSICIAN'S ASSISTANTS. A 1977 New Mexico statute amends the state's mandatory continuing education requirements by extending the law to include physician's assistants. Each certified physician's assistant must annually submit proof of completion of continuing education as required by the board of medical examiners.

WASHINGTON: COSTS, RISKS, AND BENEFITS OF SURGERY. During the dispute in Congress over whether there is too much surgery performed in this country, a news conference was held in Washington, DC, by the Office of Health Policy Information at the Harvard School of Public Health to introduce a new book, "Costs, Risks and Benefits of Surgery." One of the studies in the book said that present costs and risks of surgery "appear to be equal, or nearly equal to benefits." Elective hysterectomy, a subject which has drawn much fire from members of the House Commerce Subcommittee on Investigations, raises the question of quality-of-life benefits, the book states. "It cannot be assumed that easy answers can be provided," it adds. "The individual patient may consider that the quality-of-life benefits of hysterectomy are sufficient to offset attendant risks; indeed, based on the extremely high hysterectomy elective rates reported for physicians' wives, who should be reasonably informed 'consumers', it seems likely that many women will make this choice." However, the book goes on, if and when society agrees to make "necessary" medical care available to every citizen as a right, "at issue will be the allocation of public funds for a procedure when it appears to be more of a convenience or luxury than a necessity, and in competition with growing demands for funds to pay for other medical procedures, many of which may present stronger claims."

WASHINGTON: NON-PROFIT ASSOCIATIONS. The threat of Federal Trade Commission direct jurisdiction over non-profit associations such as medical organizations has been blocked in Congress. The House Commerce Committee by voice vote rejected the proposal.

WASHINGTON: MEDICARE ERRORS. HEW Secretary Joseph Califano has expressed "deep regret" to the AMA at "the significant number of errors" in the March 12 publication of names of health providers whose 1975 Medicare income surpassed $100,000. "I am deeply distressed at the number of errors, and I regret any embarrassment that may have been caused to any of your individual members," Califano said in a letter to James H. Sammons, MD, AMA executive vice president. Following the original publication of the list, the AMA and some state medical societies checked 208 of the 407 physicians on the list and found an error rate of 64.9%.

THIS SPACE CONTRIBUTED BY THE PUBLISHER AS A PUBLIC SERVICE

the quality of survival

With the steady improvement in the therapy of cancer, and consequent increase in the number of 5-year survivals, our programs reflect increasing concern with the future of the cancer patient—with the *quality* of his survival.

High priority is being given to the rehabilitation of cancer patients—those having had mastectomies, colostomies, laryngectomies, amputations, and other drastic treatments for cancer.

Our "Reach to Recovery" program is a dramatic example. This program helps the physician meet many special needs of the postmastectomy patient on the road to total recovery. Patients receive psychological reassurance and practical help from women who have had the same surgery.

The laryngectomee also receives the benefit of our rehabilitation program. Supported by the Society, the International Association of Laryngectomees, through its local IAL clubs, provides such services as individual and group speech therapy, psychological counseling, visits to new patients, safety training, public education and social activities.

Our rehabilitation programs not only give heart and help to patients but provide the physician with vital aids necessary to improve the *quality* of survival.

American Cancer Society

MEETINGS

ROCKY MOUNTAIN CANCER CONFERENCE

The Colorado Division, American Cancer Society, and Colorado Medical Society will present the 31st Annual Rocky Mountain Cancer Conference July 14-16, 1977, in Snowmass, Colo. The theme of this year's conference is "Melanomas and Biomarkers." The guest faculty includes John H. Budd, MD, President, American Medical Association; Harry Goldsmith, MD, Temple University Medical College, Philadelphia; Frank J. Rauscher, PhD, senior vice-president for research, American Cancer Society; R. Lee Clark, MD, president, American Cancer Society; Stanley G. Korenman, MD, Veterans Administration Hospital, Sepulveda, Calif; and Richard J. Reed, MD, Tulane University Medical College, New Orleans. Conference sessions are scheduled in the mornings only, so attendees can take advantage of the recreational facilities in Snowmass. Activities available include golfing, tennis, fishing, horseback riding, hiking, swimming and shopping. A special barbecue for attendees, their families and guests will be held Friday evening, July 15.

Contact: Rocky Mountain Cancer Conference, 1809 E 18th Ave, Denver 80218.

TEXAS RESEARCH INSTITUTE OF MENTAL SCIENCES

The Sixth Annual Southwestern Partial Hospitalization Conference, sponsored by the Texas Research Institute of Mental Sciences, will take place in Houston, July 29-30, 1977. The conference provides a forum for the interchange of information dealing with present operational methods and research in partial hospitals of every type and character (day treatment centers, night hospitals, halfway houses, etc.) and for in-depth exploration of means of developing effective treatment methods for patients in partial hospitalization settings.

Contact: Southwestern Partial Hospitalization Conference, c/o Kevin Roberts, PhD, Texas Research Institute of Mental Sciences, 1300 Moursund, Texas Medical Center, Houston, Tex 77020.

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, 20th Annual Ruidoso Family Practice Seminar, Inn of the Mountain Gods, Mescalero, NM, Jul 18-21, 1977. Scientific program by University of New Mexico School of Medicine. 17 hours, AAFP Prescribed; 17 hours, Category 4, New Mexico Board of Medical Examiners. Contact: Bob Reid, Convention Director, Box 456, Sunland Park, NM 88063.

AMERICAN ASSOCIATION FOR CLINICAL CHEMISTRY, 29th National Meeting, Conrad Hilton Hotel, Chicago, Jul 17-22, 1977. Symposium program topics: trauma tissue oxygen deficiency, gastrointestinal hormonal functions, chemistry of aging, synovial and cerebrospinal fluids, serum and lymphocyte membrane immunoglobulins, chemistry and biology of immunoglobulins, complement system and immunochemistry, immunity and neoplastic diseases, autoimmune diseases, clinical immunochemistry to the pediatric patient, hormone analyses, frontiers in clinical chemistry, perspectives in pediatric chemistry, control of laboratory performance. Plenary session, Jul 18, includes general diagnostics lectureship; lecturer, Dr Henry G Kunkel, professor of biochemistry and immunology, Rockefeller University, New York, to speak on serum and lymphocyte membrane immunoglobulins. Registration fee for nonmembers, $60. Registration fees permit participation in all symposia, contributed papers in afternoons, attendance at over 300 exhibit booths. Other special activities: workshops, mixers, breakfast roundtables, banquet. 13 hours, Category 1, AMA Physician's Recognition Award; Category A1, Pathology Continuing Medical Education Certificate. Contact: Chicago Section, Box 2, Hines, Ill 60141.

For other courses and symposia, see Continuing Education Courses, pp 32-34.

JULY

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Mescalero, NM, Jul 18-21, 1977. Bob Reid, Convention Dir, Box 456, Sunland Park, NM 88063.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, Vail, Colo, Jul 2-6, 1977. Howard Silber, Exec Officer, Box 912, Omaha, Neb 68101.

COLORADO DIVISION, AMERICAN CANCER SOCIETY, Rocky Mountain Cancer Conference, Snowmass, Colo, Jul 14-16, 1977. 1809 E 18th Ave, Denver, Colo 80218.

FLORIDA CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, 1977 Clinical Conference on Pre-Hospital Emergency Care, Orlando, Fla, Jul 8-10, 1977. Registrar, 600 Courtland St, Suite 420, Orlando, Fla 32804.

■ TEXAS PHARMACEUTICAL ASSOCIATION, Waco, Tex, Jul 24-27, 1977. Box 14706, Austin, Tex 78761.

■ TEXAS RESEARCH INSTITUTE OF MENTAL SCIENCES, Sixth Annual Southwestern Partial Hospitalization Conference, Houston, Jul 29-30, 1977. c/o Kevin Roberts, PhD, Texas Research Institute of Mental Sciences, 1300 Moursund, Texas Medical Center, Houston 77030.

AUGUST

AMERICAN ASSOCIATION FOR RESPIRATORY THERAPY, Pajara Dunes, Calif, Aug 28, 1977. Robert R Weilacher, 7411 Hines Place, Dallas 75235.

AMERICAN HOSPITAL ASSOCIATION, Atlanta, Aug 29-Sep 1, 1977. 840 N Lake Shore Dr, Chicago 60611.

AMERICAN MEDICAL ASSOCIATION, Fifth Western Hemisphere Nutrition Congress, Quebec City, Canada, Aug 15-18, 1977. Department of Foods and Nutrition, AMA, 535 N Dearborn St, Chicago 60610.

ASPEN MUSHROOM CONFERENCE, Aspen, Colo, Aug 7-12, 1977. Aspen Mushroom Conference, c/o Beth Israel Hospital, 1601 Lowell Blvd, Denver 80204.

INTERNATIONAL CONFERENCE ON MEDICAL COMPUTING, Toronto, Aug 8-13, 1977. Department of Computer Systems in Medicine, American Medical Association, 535 N Dearborn St, Chicago 60611.

■ TEXAS PERINATAL ASSOCIATION, El Paso, Tex, August 1977. Clark M Hinkley, MD, Pres, 1801 Allen Parkway, Houston 77019.

SEPTEMBER

AMERICAN ASSOCIATION OF ELECTROMYOGRAPHY AND ELECTRODIAGNOSIS, Salt Lake City, Sep 30-Oct 1, 1977. JL Melvin, MD, Sec-Treas, 10437 W Watertown Plank Rd, Box 7372, Milwaukee 53226.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Hot Springs, Va, Sep 8-10, 1977. GW Mitchell, Jr, MD, Sec, 171 Harrison Ave, Boston 02111.

AMERICAN ASSOCIATION FOR THE SURGERY OF TRAUMA, Detroit, Sep 15-17, 1977. JA Boswick, Jr, MD, Admn Officer, University of Colorado, 4200 E Ninth Ave, Denver 80220.

AMERICAN CANCER SOCIETY, NATIONAL CANCER INSTITUTE, National Conference on the Lymphomas and the Leukemias, New York, Sep 29-Oct 1, 1977. Sidney L Arje, MD, 777 Third Ave, New York 10017.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Hartford, Conn, Sep 10-11, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Lake of the Ozarks, Mo, Sep 16-18, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Chicago, Sep 24-25, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Hot Springs, Va, Sep 30-Oct 2, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Seminar on Negotiations, Bloomington, Minn, Sep 10-12, 1977. Department of Negotiations, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, Sep 27-Oct 1, 1977. Ms L Sablack, Exec Sec, 5272 River Rd, Suite 290, Bethesda, Md 20014.

AMERICAN ROENTGEN RAY SOCIETY, Boston, Sep 27-30, 1977. JF Martin, MD, Sec, 300 S Hawthorne Rd, Winston-Salem, NC 27103.

AMERICAN SOCIETY OF INTERNAL MEDICINE, Washington, DC, Sep 28-30, 1977. Exec Dir, 703 Market St #535, San Francisco 94103.

■ AMERICAN SOCIETY OF OPHTHALMOLOGIC AND OTOLARYNGOLOGIC ALLERGY, Dallas, Sep 30-Oct 1, 1977. WA Ward, MD, Sec-Treas, Bowman Gray School of Medicine, Winston-Salem, NC 27103.

INTERNATIONAL CONFERENCE ON RED CELL METABOLISM AND FUNCTION, Ann Arbor, Mich, Sep 14-17, 1977. GJ Brewer, MD, Department of Human Genetics, University of Michigan Medical School, Ann Arbor, Mich 48109.

KENTUCKY MEDICAL ASSOCIATION, Louisville, Sep 25-29, 1977. RG Cox, Exec Vice-pres, 3532 Ephraim McDowell Dr, Louisville 40205.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA, Washington, DC, Sep 15-16, 1977. FP Ferraraccio, Exec Sec, 2007 Eye St NW, Washington, DC 20006.

MID-CONTINENT PSYCHIATRIC ASSOCIATION, Oklahoma City, Sep 9-11, 1977. A Paredes, Sec-Treas, Box 26901, Oklahoma City 63190.

MONTANA MEDICAL ASSOCIATION, Missoula, Mont, Sep 29-Oct 1, 1977. GB Zins, Exec Dir, 2021 11th Ave, Helena, Mont 59601.

AMERICAN CANCER SOCIETY, National Conference on Human Values and Cancer, Chicago, Sep 7-9, 1977. American Cancer Society, Second National Conference on Human Values and Cancer, 777 Third Ave, New York 10017.

PAN AMERICAN MEDICAL WOMEN'S ALLIANCE, San Juan, Puerto Rico, Sep 1-6, 1977. Dr T Foster, Sec, 6417 Pelham St, San Jose, Calif 95123.

RADIOLOGY FOR FAMILY PRACTITIONERS, Santa Fe, NM, Sep 15-17, 1977. WJ Levy, MD, Sec, Symposia de Santa Fe, Box 5175, Santa Fe, NM 87502.

SOCIETY FOR PEDIATRIC RADIOLOGY, Boston, Sep 24-25, 1977. NT Griscom, MD, Sec-Treas, Department of Radiology, Children's Hospital Medical Center, 300 Longwood Ave, Boston 02115.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, El Paso, Tex, Sep 17-20, 1977. Donald C Jackson, 1901 N Lamar Blvd, Austin, Tex 78705.

■ TEXAS CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, San Antonio, Tex, Sep 12-14, 1977. George Pruett, MD, Pres, 730 N Main, B-112, San Antonio, Tex 78205.

■ TEXAS MEDICAL ASSOCIATION, Fall Conference, Austin, Tex, Sep 9-11, 1977. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.

UTAH STATE MEDICAL ASSOCIATION, Location to be announced, Sep 13-16, 1977. HW Brewster, Admn Officer, 42 S Fifth East St, Salt Lake City 84102.

OCTOBER

AMERICAN ACADEMY FOR CEREBRAL PALSY AND DEVELOPMENTAL MEDICINE, Atlanta, Oct 5-9, 1977. JE Bryan, Exec Sec, 1255 New Hampshire Ave, Washington, DC 20036.

■ AMERICAN ACADEMY OF CHILD PSYCHIATRY, Houston, Oct 19-21, 1977. VQ Bausch, Exec Dir, 1800 R St NW, Washington, DC 20009.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Las Vegas, Nev, Oct 10-13, 1977. R Tusken, Exec Dir, 1740 W 92nd St, Kansas City, Mo 64114.

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, Bal Harbour, Miami, Fla, Oct 30-Nov 4, 1977. CC Herold, Exec Dir, 30 N Michigan Ave, Suite 922, Chicago 60602.

AMERICAN ACADEMY OF PSYCHIATRY AND THE LAW, New Orleans, Oct 20-23, 1977. WD Weitzel, MD, Department of Psychiatry, College of Medicine, University of Kentucky, Lexington, Ky 40506.

AMERICAN ASSOCIATION OF PUBLIC HEALTH PHYSICIANS, Washington, DC, Oct 30-Nov 1, 1977. JV Sessums, Jr, MD, Sec-Treas, 1703 Ridgemont, Austin, Tex 78723.

AMERICAN ASSOCIATION FOR THE STUDY OF LIVER DISEASES, Chicago, Oct 31, 1977. MA Rothschild, MD, Sec-Treas, VA Hospital, First Ave at E 24th St, New York 10010.

AMERICAN CLINICAL AND CLIMATOLOGICAL ASSOCIATION, Colorado Springs, Colo, Oct 23-26, 1977. JE Wood, MD, Sec-Treas, Pennsylvania Hospital, Philadelphia 19107.

AMERICAN COLLEGE OF CHEST PHYSICIANS, Las Vegas, Nev, Oct 30-Nov 3, 1977. 911 Busse Highway, Park Ridge, Ill 60068.

AMERICAN COLLEGE OF GASTROENTEROLOGY, New Orleans, Oct 23-29, 1977. D Weiss, Exec Dir, 299 Broadway, New York 10007.

AMERICAN COLLEGE OF PREVENTIVE MEDICINE, Atlanta, Oct 30-31, 1977. W Bentley, Exec Dir, 801 Old Lancaster Rd, Bryn Mawr, Pa 19010.

■ AMERICAN COLLEGE OF SURGEONS, Dallas, Oct 17-21, 1977. CR Hanlon, Dir, 55 E Erie St, Chicago 60611.

■ AMERICAN COUNCIL OF OTOLARYNGOLOGY, Dallas, Oct 6, 1977. Harry W McCurdy, MD, FACS, Exec Dir, 1100 17th St, NW, Suite 602, Washington, DC 20036.

AMERICAN DENTAL ASSOCIATION, Miami, Oct 9-13, 1977. C Gordon Watson, DDS, 211 E Chicago Ave, Chicago 60611.

AMERICAN DIETETIC ASSOCIATION, Los Angeles, Oct 10-14, 1977. Clara Zempel, RD, 430 N Michigan Ave, Chicago 60611.

■ AMERICAN GROUP PRACTICE ASSOCIATION, Houston, Oct 5-8, 1977. WG Davis, MD, Exec Vice-pres, 20 S Quaker Lane, Box 949, Alexandria, Va 22313.

■ AMERICAN INSTITUTE OF ULTRASOUND IN MEDICINE, Dallas, Oct 29-Nov 4, 1977. D LaMaster, Mng Editor, Box 25606, Oklahoma City 73125.

AMA REGIONAL MEETING, Huron, Ohio, Oct 7-9, 1977. AMA, Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMA REGIONAL MEETING, Honolulu, Oct 30-Nov 3, 1977. AMA, Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMA SEMINAR ON NEGOTIATIONS, Atlanta, Oct 15-17, 1977. AMA, Department of Negotiations, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL RECORD ASSOCIATION, Atlanta, Oct 16-21, 1977. Mary-j Waterstraat, RRA, 875 N Michigan Ave, Chicago 60611.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, October 1977. L Sablack, Exec Sec, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN PHYSIOLOGICAL SOCIETY, St Louis, Oct 22-27, 1977. OE Reynolds, PhD, Exec Sec-Treas, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SCHOOL HEALTH ASSOCIATION, Atlanta, Oct 13-16, 1977. SJ Jerrick, Exec Dir, Box 708, ASHA National Office Bldg, Kent, Ohio 44240.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, New Orleans, Oct 15-19, 1977. JW Andes, Exec Sec, 515 Busse Highway, Park Ridge, Ill 60068.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, Atlanta, Oct 17-23, 1977. WF Hoffman, Jr, Exec Dir, 2400 E Devon Ave, Suite 218, Des Plaines, Ill 60018.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Las Vegas, Nev, Oct 20-28, 1977. DL Gilcrest, Exec Dir, 2100 W Harrison St, Chicago 60612.

AMERICAN SOCIETY OF MAXILLOFACIAL SURGEONS, San Francisco, Oct 30-Nov 4, 1977. CA Janda, MD, DDS, Sec, 120 Oakbrook Center Mall, Westchester, Ill 60153.

AMA Challenges in the Courts

One of the professions's major concerns today is government's mounting pressure for increasing regulation of medicine. In response to these challenges, the AMA has taken a new position of advocacy for physicians and the public which has resulted in the AMA's very first lawsuits against the government.

In March 1975, the AMA took HEW to court over its Utilization Review Regulations which required review of all Medicare and Medicaid hospitalizations within 24 hours. The AMA contended the regulations constituted unlawful interference with the rights of physicians and patients. The AMA won its case and HEW withdrew the regulations.

The AMA also initiated legal action against HEW's Maximum Allowable Cost Rule, charging that the rule, which would govern the prescription of drugs for Medicare and Medicaid patients, intrudes on clinical decisions made by physicians. The case is now pending.

The AMA has also joined with co-plaintiffs, the state of North Carolina, the state of Nebraska and the North Carolina Medical Society, in a suit against the Health Planning Act of 1974 which gives the Secretary of HEW sweeping powers over nearly every aspect of health care.

These are just some of the many actions the AMA has taken to protect your rights and interests and the rights and interests of your patients. With your support, it can be even more effective.

Join us.
We can do much more together.

Dept. of Membership Development
American Medical Association
535 N. Dearborn St./Chicago, IL 60610

Please send me more information on the AMA and AMA membership.

Name _____

Address _____

City/State/Zip _____

CONTINUING EDUCATION COURSES

JULY

Basic Sciences: Microbiology & Immunology

Title: Workshop in Immunodiagnosis
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: July 21-24, 1977
Duration: Continuous; 7½ hours instruction per day; 30 total course hours
Fee: $150
Designed For: Specialists
Enrollment: Minimum, 20; Maximum, 50
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, laboratory work, lecture, open question
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Physiology

Title: Interpretation of the ECG in Health Screening
Sponsor: Baylor College of Medicine, Houston
Location of Course: Baylor College of Medicine, Houston
Dates: July-August 1977
Duration: Continuous; 5-6:30 pm, 12 days; 18 total course hours
Fee: To be announced
Designed For: General practitioners; Specialists
Enrollment: Minimum, 10
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, enrollee performs procedure, lecture, open question, television
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Psychiatry

Title: Advanced Tutorial in Rorschach
Sponsors: UT Health Science Center at San Antonio
Dates: July 16-17, 1977
Duration: Continuous; 6 hours Saturday; 5 hours Sunday; 11 total course hours
Fee: $90
Designed For: Specialists in Psychology
Enrollment: Maximum, 20
Teaching Methods: Audiovisual materials, open question, seminar, television
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Radiology & Radioisotopes

Title: External Beam, Interstitial, and Intracavitary Dosimetry—Principles
Sponsors: UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute
Location of Course: UT Health Science Center at Houston
Dates: July 5-15, 1977
Duration: Continuous; 8 hours instruction per day; 10 days; 80 total course hours
Fee: $350
Designed For: Specialists in Radiotherapy; Physicists
Teaching Methods: Enrollee performs procedure, laboratory work, lecture
Contact: Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: External Beam, Interstitial, and Intracavitary Dosimetry—Manual and Computer Methods of Calculation
Sponsors: UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute
Location of Course: UT Health Science Center at Houston
Dates: July 18-29, 1977
Duration: Continuous; 8 hours instruction per day; 10 days; 80 total course hours
Fee: $350
Designed For: Specialists in Radiotherapy, Dosimetry; Physicists
Teaching Methods: Enrollee performs procedure, laboratory work, lecture
Contact: Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Urology

Title: Urology Oncology Seminar
Sponsors: Division of Continuing Education, UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute
Location: Auditorium, M.D. Anderson Hospital and Tumor Institute, Texas Medical Center, Houston
Dates: July 28-29, 1977
Contact: Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

AUGUST

Cardiovascular Disease

Title: Tutorials in the Tetons: Cardiac Emergencies (Third Annual)
Sponsors: American College of Cardiology; Cardiovascular Center, University of Nebraska Medical Center, Omaha, Neb
Location of Course: Jackson Lake Lodge, Grand Teton National Park, Moran, Wyo
Dates: Aug 21-23, 1977
Fee: American College of Cardiology members, $150; Nonmembers, $175
Credit: 12 hours, Category 1, AMA Physician's Recognition Award; State Board of Education, Maryland

Contact: Miss Mary Anne McInerny, Director, Extramural Programs, Division of Continuing Education, American College of Cardiology, 9650 Rockville Pike, Bethesda, Md 20014

Dermatology

Title: Office Dermatology
Sponsors: American Academy of Dermatology, Evanston, Ill; Colby College, Waterville, Me
Location of Course: Colby College, Waterville, Me
Dates: Aug 3-6, 1977
Fee: $150
Designed For: General practitioners
Credit: 15 hours, Category 1, AMA Physician's Recognition Award
Contact: Department of Continuing Medical Education, American Academy of Dermatology, 820 Davis St, Evanston, Ill 60201

Gastroenterology

Title: Practical Aspects of Diagnosis and Management of Diseases of the Digestive Tract
Sponsor: Office of Continuing Education, Baylor College of Medicine, Houston
Location of Course: Marriott Motor Hotel, Houston
Dates: Aug 26-27, 1977
Fee: $150 (includes luncheons)
Credit: 17 hours, Category 1, AMA Physician's Recognition Award; AAFP credit requested
Contact: Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Pathology

Title: 19th Annual Postgraduate Course in Dermal Pathology
Sponsors: Division of Continuing Education, UT Health Science Center at Houston; UT System Cancer Center, M. D. Anderson Hospital and Tumor Institute, Houston; American Society of Dermatopathology
Location of Course: Houston
Dates: Aug 21-26, 1977
Duration: 5½ days
Credit: 38 hours, Category 1, AMA Physician's Recognition Award
Contact: Office of the Director, UT Health Science Center at Houston, Division of Continuing Education, Box 20367, Houston 77025

Urology

Title: Urology Oncology
Sponsors: UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute
Location of Course: UT System Cancer Center, Houston
Dates: Aug 4-5, 1977
Duration: 6 hours instruction per day; 12 total course hours
Fee: To be announced
Designed For: General practitioners; Specialists in Urology
Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Lecture, panel
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

A character all its own.

Valium (diazepam) is a benzodiazepine with a character all its own. Pharmacologically, it has been described as more potent mg-per-mg than other available anxiolytic benzodiazepines. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

If you're sick of visiting auto showrooms and high-pressure salesmen, try our remedy.

You can see every kind of car made — American or foreign — in one place. Yours. Just let us know the cars you're interested in. We'll bring you full color brochures with all the information. Then we'll make all the leasing arrangements. It's easy — and your new car will be just what the doctor ordered.

There are more advantages too:

- Tax write-offs
- Low lease costs
- Positive cash flow
- No record-keeping necessary
- Custom-tailored leases
- Total maintenance of Lincoln-Mercury products.

Texas Medical Association Automobile Lease Program

Underwritten by:

Bankston Rentals, Inc. • 4747 LBJ Freeway • Dallas, Texas 75234 • 214/233-1441
Southwest Motor Leasing, Inc. • 6737 Southwest Freeway • Houston, Texas 77074 • 713/777-3816

"...Sleep that knits up the ravell'd sleave of care..."
– WILLIAM SHAKESPEARE, *MACBETH, ACT II, SC. 2*

Insomnia
a shade of blue that often accompanies depression

And, in anxiety/depression, Adapin® (doxepin HCl) often helps restore disturbed sleep patterns, such as early morning awakening, with a single daily dose at bedtime.[1] Adapin quickly relieves the patient's anxiety, gradually brightens his mood and outlook, with optimal antidepressant response usually evident within two to three weeks.

1. Goldberg HL, Finnerty RJ, Cole JO: Doxepin: Is a single daily dose enough? *Am J Psychiatry* 131:1027-1029, 1974

Brief Summary of Prescribing Information
ADAPIN® (doxepin HCl) Capsules

Indications—Relief of symptoms of anxiety and depression.

Contraindications—Glaucoma, tendency toward urinary retention, or hypersensitivity to doxepin.

Warnings—Adapin has not been evaluated for safety in pregnancy. No evidence of harm to the animal fetus has been shown in reproductive studies. There are no data concerning secretion in human milk, or on effect in nursing infants.

Usage in children under 12 years of age is not recommended. MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with this drug, as serious side-effects and death have been reported with the concomitant use of certain drugs and MAO inhibitors.

In patients who may use alcohol excessively potentiation may increase the danger inherent in any suicide attempt or overdosage.

Precautions—Drowsiness may occur and patients should be cautioned against driving a motor vehicle or operating hazardous machinery. Since suicide is an inherent risk in depressed patients they should be closely supervised while receiving treatment. Although Adapin has shown effective tranquilizing activity, the possibility of activating or unmasking latent psychotic symptoms should be kept in mind.

Adverse Reactions—Dry mouth, blurred vision and constipation have been reported. Drowsiness has also been observed.

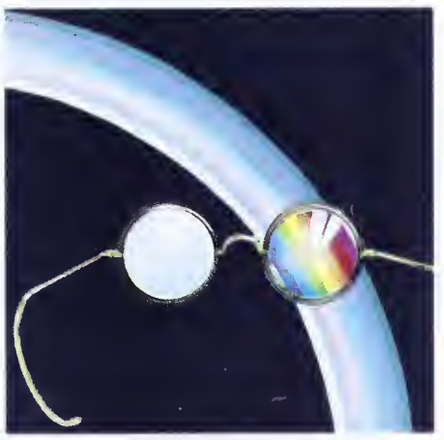
Adverse effects occurring infrequently include extrapyramidal symptoms, gastrointestinal reactions, secretory effects such as sweating, tachycardia and hypotension. Weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash and pruritus may also occur.

Dosage and Administration—In mild to moderate anxiety and/or depression: 10 mg to 25 mg t.i.d. Increase or decrease the dosage according to individual response. **Usual optimum daily dosage is 75 mg to 150 mg** per day, not to exceed 300 mg per day.

Antianxiety effect usually precedes the antidepressant effect by two or three weeks.

How Supplied—Each capsule contains doxepin, as the hydrochloride: 10 mg, 25 mg and 50 mg capsules in bottles of 100 and 1000.

For complete prescribing information please see package insert or PDR.



When they see life in shades of blue... help them see life in all its colors.

Adapin®
(doxepin HCl)

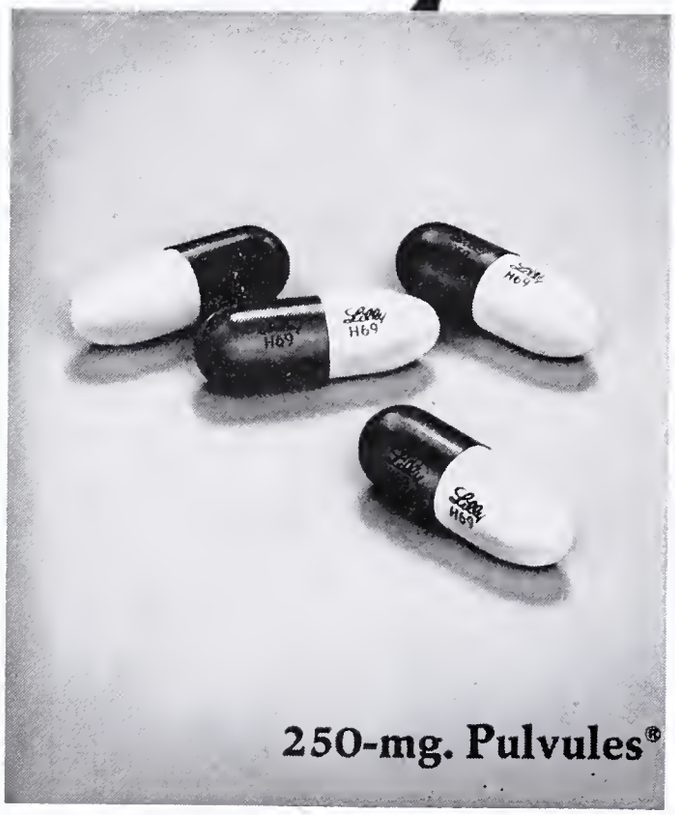
single daily dose recommended h.s.

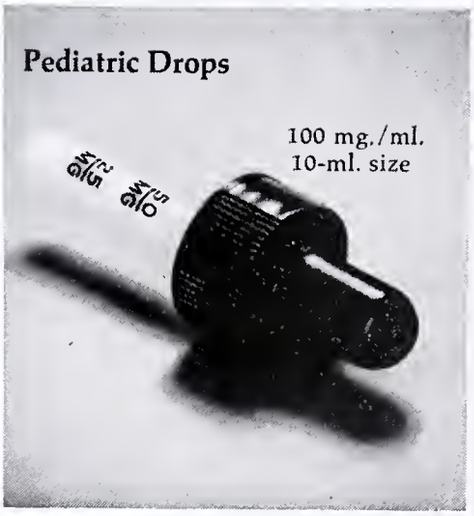
10-mg capsules
25-mg capsules
50-mg capsules

PENNWALT

Pennwalt Prescription Products
Pharmaceutical Division
Pennwalt Corporation
Rochester, New York 14603

easy to take





Keflex®
cephalexin

Lilly

500738

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

Near-drowning in children

Mason P. Gilfoil, MD; Hugo F. Carvajal, MD

The Drowned Children

By Louise Glück

You see, they have no judgment.
So it is natural that they should drown,
first the ice taking them in,
and then, all winter, their wool scarves
floating behind them as they sink
until at last they are quiet.
And the pond lifts them in its manifold dark arms.
But death must come to them differently
so close to the beginning.
As though they had always been
blind and weightless. Therefore
the rest is dreamed:
the lamp, the good white cloth that covered
the table,
their bodies.
And yet they hear the names they used
shaken out over the pond
like chores not undertaken:
What are you waiting for,
come home, come home, lost
in the waters, blue and permanent.

In Texas accidental drowning claims the life of more than 500 individuals per year. Close to 40% of these are children. The incidence of near-drowning is unknown, but it is estimated to be two to three times that of drowning.[1] During a three-year period, 22 pediatric cases of near-drowning were seen at The University of Texas Medical Branch (UTMB) in Galveston. All 22 children required hospitalization, and all survived without sequelae. This article reviews their hospital course and highlights their therapy. In addition, the hospital course and management of the most severe case is reported. Therapeutic recommendations are made based on our experience and that of others.

Reprinted by permission; © 1974
The New Yorker Magazine, Inc.

Materials and Methods

We reviewed the hospital records of 22 consecutive near-drowning victims under 15 years of age, admitted to the UTMB hospitals during the years 1972-1974. Seventeen cases occurred in salt water. There were 5 blacks, 5 of Hispanic descent, 11 whites, and 1 American Indian.

Associated abnormalities included asthma in one case, closed head injury in another, and prominent neurologic symptoms of unknown etiology in yet another. One patient was taking isoniazid for tuberculin skin test conversion.

Results

The average length of hospitalization was 1.8 days, with a range of 12 hours to 8½ days. Eight of the 22 patients were discharged within 24 hours and 10 others during the second day.

The age distribution of the patients studied is shown in Fig 1. None were under 4 years of age. Their clinical presentation is summarized in Fig 2. Basilar rales and cyanosis disappeared soon after admission to the hospital. History revealed that ten children lost consciousness at the time of the accident, but only one child was semicomatose upon admission.

Pertinent laboratory data are summarized in Fig 3. Leukocytosis was not always present upon admission but was prominent within 6 to 12 hours. Of the 10 patients who were hypoxic upon admission, 3 were also acidotic. An additional 7 patients had significant metabolic acidosis but no evidence of hypoxemia; in other words, 17 of 19 patients were hypoxic, acidotic, or both. Only 2 patients had arterial carbon dioxide pressure ($PaCO_2$) greater than 50 mm Hg. Transient hyper-

natremia with serum sodium levels of 150 and 151 mEq/liter was observed in two of the children. There were no cases of hyponatremia or anemia.

The chest x-ray taken upon admission was abnormal in 14 patients (64%) and the picture frequently worsened during the next six hours (see case report). Radiologic findings varied from peribronchial or basilar infiltrates, or both, to pulmonary edema. The radiologic abnormalities cleared within one to seven days of the near-drowning episode in all but one of the patients.

The therapeutic modalities used are presented in Fig 4. Lack of consistency in therapy was due to the fact that several resident physicians were involved in the management of the patients.

Discussion

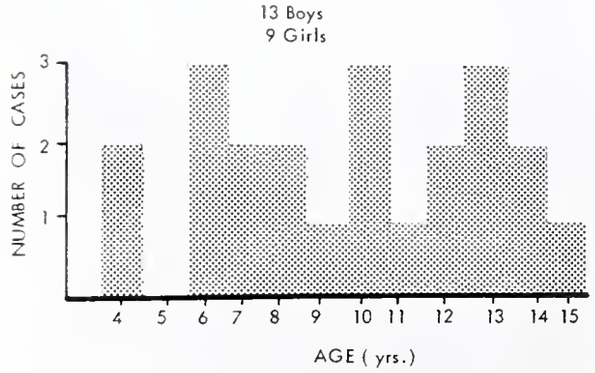
In 1947 Swann and associates[2,3] pioneered the experimental investigation of drowning. At that time attention was focused on the profound electrolyte changes seen in drowned dogs. There were striking shifts of water from the circulation into lung alveoli in salt-water drowning, and from the lung into the circulation in fresh-water drowning. The former was characterized by volume depletion, hemoconcentration, hyperelectrolytemia, hypotension, and shock; the latter, by volume expansion, hemodilution, hemolysis, hyperkalemia, and ventricular fibrillation.

Subsequent experiments by Modell and others[4,5] demonstrated a relationship between the volume of aspirate and the degree of hemoconcentration or hemodilution. On this basis, it became apparent that salt water was about twice as lethal as fresh water, volume for volume. As Modell and his colleagues looked more closely at their data, they determined that the changes so well described by Swann were much less severe at lower volumes of aspirate, and that many of the changes were in fact transient in animals that survived the initial aspiration insult. Furthermore, it was found that at low volumes of aspirate, the animals did not die of hypovolemia and hemoconcentration or of hemodilution and electrolyte imbalance, but of respiratory insufficiency. They did not experience severe electrolyte disturbances, nor did ventricular fibrillation develop.

In human near-drowning victims, our data and those of others[6-8] indicate that the electrolyte disturbances are mild, if present at all. Hemoglobinemia, if carefully sought, may be demonstrated, but it rarely has any clinical significance.[7,9] The most striking abnormality invariably is found in the analysis of blood gases.

In the nearly-drowned animal, be it fresh or salt water, the lungs are stiff and

1. Age distribution of 22 near-drowning cases in children admitted to UTMB between 1972 and 1974.



2. Clinical presentation of 22 near-drowning cases in children.

Finding	Frequency — Number of Cases	%
Tachypnea (>20 resp/min)	20	91
Basilar rales	18	83
Cyanosis	13	59
Loss of consciousness (transient)	10	45
Fever (>100°F)	7	32
Wheezing	2	9

nonexpandable. When the experiment is carried out with salt water, the airway is filled with pink, frothy fluid. This does not occur when fresh water is used, but much higher pressures are required to expand the lung. Giammona and Modell[10] proposed different mechanisms for the loss of lung compliance in fresh and salt-water drowning. In fresh water the change is caused by atelectasis and inactivation of the pulmonary surfactant; in salt water it is the result of decreased surface tension caused by fluid and protein leakage into the alveoli. Both lesions result in the perfusion of nonventilated alveoli and intrapulmonary shunting of blood, which in turn explains the hypoxemia and metabolic acidosis, the leading causes of morbidity and mortality in the near-drowning victim.

Therapeutic efforts should be focused on the pulmonary pathology. Adequate oxygenation is essential. Oxygen therapy with the highest concentration available should be instituted immediately and continued at appropriate concentrations until the arterial blood gases reveal a normal arterial oxygen pressure (PaO_2) while the patient breathes room air for at least one hour. Pulmonary therapy is theoretically the most direct approach to the problem. Intermittent positive pressure breathing (IPPB) is usually effective in expanding the noncompliant alveoli of either fresh or salt water near-drowning. In severe cases, positive end expiratory pressure (PEEP) via an endotracheal tube may be lifesaving. Experimental data supporting PEEP therapy in dogs[11,12] and humans[12-14] have been reported. In the case reported here, the patient's condition and oxygenation deteriorated noticeably when attempts were made to discontinue PEEP 12 hours after admission (Fig 5).

The use of steroids has been advocated for their anti-inflammatory effect,[15] but, there are no clinical or experimental data to support their use in the near-drowning patient. In cases of aspiration pneumonitis, a beneficial effect of steroid therapy has been demonstrated.[16-18] Therefore, if aspiration of acidic gastric contents has occurred or severe bronchospasm is present, steroid therapy may be attempted. In the latter situation, bronchodilators such as intravenous aminophylline (4 mg/kg of body weight) or isoproterenol (0.25 ml of 1:200 solution via nebulizer) may also produce dramatic results.

In most cases of near-drowning, the victim swallows large amounts of water, vomiting is frequent, and the risk of aspiration is very high.[1,6,19,20] Nasogastric decompression is second only to oxygen therapy and should be done routinely even in the conscious and alert patient.

Because the water aspirated by near-drowning victims is frequently contaminated, broad spectrum antibiotics should be used liberally. Ampicillin is usually adequate. Since the risk of pneumonia is

3. Laboratory findings of 22 near-drowning cases in children.

Finding	Frequency	
	Number of Cases	%
Leukocytosis (>10,000 WBC/cu mm)	16/19	84
Hypoxemia (PaO_2<80mm Hg)	10/19	53
Acidosis (pH< 7.30)	10/19	53
Hypernatremia (serum Na>150mEq/L)	2/21	9
Abnormal chest x-ray	14/22	64

4. Therapeutic modalities used in 22 near-drowning cases in children.

Therapy	Frequency	
	Number of Cases	%
Supplemental O_2	17	77
Antibiotics	13	59
Nasogastric suction	10	45
Intermittent positive pressure breathing	10	45
Bronchodilators	8	36
Steroids	3	13

high, sputum cultures should be obtained early.

Intravenous fluids are particularly important during the initial phase. In most cases lactated Ringers, 20 ml/kg of body weight administered over a one-hour period, is sufficient to return the blood pressure to normal levels. If the patient remains hypotensive, a 5% solution of salt-poor albumin or plasma should be substituted. If anemia secondary to massive hemolysis is present (rare occurrence), packed cells (10 ml/kg of body weight) may be transfused.[20] As the patient recovers from the shock phase, maintenance fluids (1,500-2,000 ml/sq m of body surface/day) consisting of 5% dextrose in one-third to one-fourth normal saline solution should be given. Frequent electrolyte determinations aimed at detection of hyponatremia or hypernatremia, acidosis, or hyperkalemia need to be obtained during the period of vigorous fluid resuscitation.

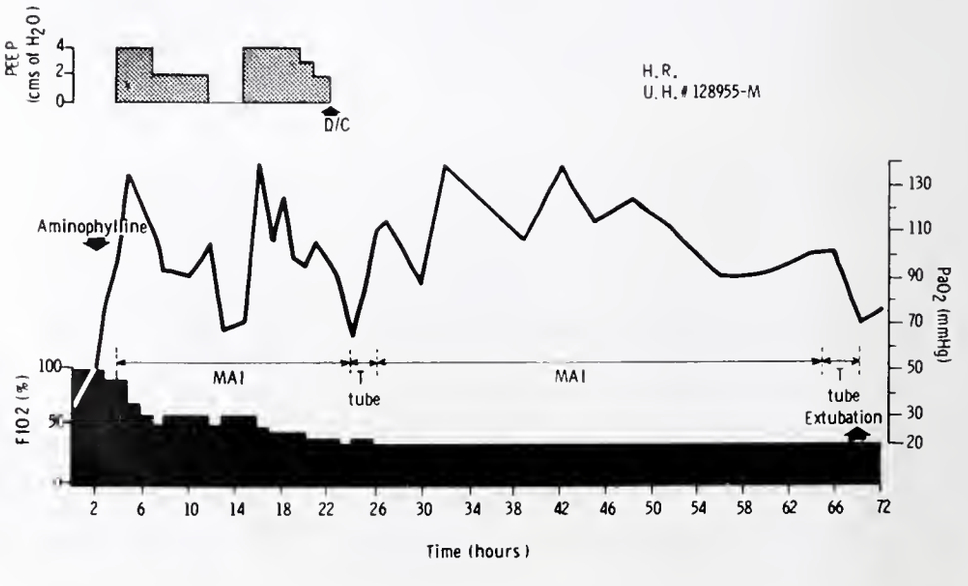
If hemoglobinemia and hemoglobinuria are severe, the administration of loop diuretics (ethacrynic acid or furosemide) is advocated.

In conclusion, fresh or salt water near-drowning should be managed in a similar fashion. Therapeutic efforts should be directed to the pulmonary abnormalities and should consist of increasing the concentration of oxygen in the inspired air. IPPB and, in severe cases, PEEP to improve oxygenation by preventing collapse of alveoli. Nasogastric decompression is mandatory. Fluid therapy directed first at volume expansion and later on at replacement of maintenance requirements is important. Electrolyte disturbances, however, are rare and seldom of any significance. Steroids may have a place in the treatment of the near-drowning victim, particularly if aspiration of gastric contents or severe bronchospasm occur. Their exact role and potential benefit need to be studied further. Early antibiotic therapy is always indicated and should be continued for as long as there is evidence of pneumonitis.

Illustrative Case Report

This was the first John Sealy Hospital admission for an 11-year-old Hispanic boy who, upon diving into a public swimming pool, struck his left occiput on the edge of the pool. He did not surface on his own, but

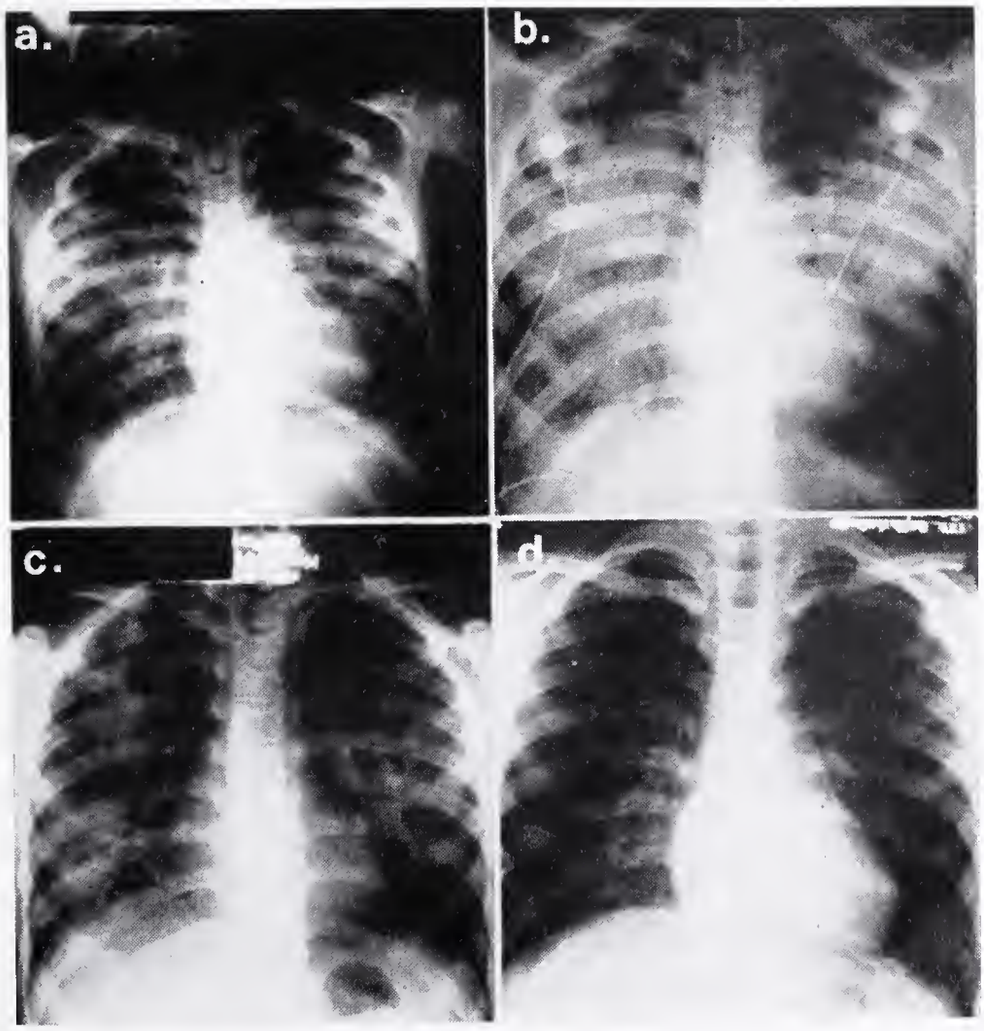
5. PaO_2 changes following accidental near-drowning in an 11-year-old boy treated at UTMB hospital in August 1975. Notice the relationship of F_IO_2 and PEEP to arterial PaO_2 levels.



was pulled out three to five minutes after entering the water. He received mouth-to-mouth resuscitation and oxygen on the scene and enroute to the hospital. Medical history, social history, family history, and review of systems were noncontributory.

Upon admission to the hospital, he was breathing spontaneously but was cyanotic and semicomatose, and had a 10 cm laceration of his left occipital scalp. Initial resuscitation included oxygen, intravenous fluids, bicarbonate, and calcium gluconate. A nasogastric tube was passed to empty the stomach, and a nasotracheal tube was inserted. Upon admission the patient's blood pH was 6.9, $PaCO_2$ 38 mm Hg, and PaO_2 20 mm Hg. Two hours later his blood pH was 7.30, $PaCO_2$ 35 mm Hg, and PaO_2 42 mm Hg. At this time therapy with the MA-I ventilator was started, but the boy failed to oxygenate on 100% oxygen. Aminophylline was then given intravenously, and he improved considerably. The addition of PEEP allowed a further reduction of fraction of oxygen in inspired air (F_IO_2) to .50 within the first six hours. The acidosis was corrected within three to four hours after admission. Efforts to decrease the level of PEEP while the patient received 40% oxygen 12 hours after the accident were unsuccessful as the blood gases rapidly deteriorated (Fig 5). It was necessary to continue the PEEP

6. Chest x-rays of 11-year-old boy, a victim of accidental near-drowning (a) upon admission to UTMB hospital, (b) six hours later, (c) second hospital day, and (d) two weeks after discharge.



and ventilator therapy for 24 and 68 hours, respectively. Within 12 to 18 hours after admission, the patient's sensorium had improved; by the second hospital day, the child was alert and communicative. Ampicillin and gentamicin therapy was begun during the first hospital day because of fever and total consolidation of the lung fields observed within six hours after the accident (Fig 6). No steroids were administered.

On the third hospital day, all tubes were removed and the patient did well except for mild hypoxemia, which persisted for 112 hours. No electrolyte disturbances, hemolysis, or changes in renal function were observed. Moderate leukocytosis with marked left shift occurred within 12 hours of the accident. The blood culture grew group A beta-hemolytic streptococcus. Skull x-rays showed no abnormalities.

On the ninth hospital day, the patient was discharged. Two and one-half months later, he was playing football without evidence of exercise intolerance, or pulmonary or neurologic sequelae.

References

1. Modell JH: Pathophysiology and Treatment of Drowning and Near-Drowning. Springfield, Ill, Charles C Thomas, 1971.

2. Swann HG, Brucer M, Moore C, et al: Fresh water and sea water drowning: a study of the terminal cardiac and biochemical events. Tex Rep Biol Med 5:423-437, 1947.

3. Swann HG, Spafford NR: Body salt and water changes during fresh and sea water drowning. Tex Rep Biol Med 9:356-382, 1951.

4. Modell JH, Moya F: Effects of volume of aspirated fluid during chlorinated fresh water drowning. Anesth 27: 662-672, 1966.

5. Modell JH, Moya F, Newby EJ, et al: The effects of fluid volume in sea water drowning. Ann Intern Med 67: 68-80, 1967.

6. Griffin GE: Near-drowning: its pathophysiology and treatment in man. Mil Med 131:12-21, 1966.

7. Modell JH, Davis JH, Giammona ST, et al: Blood gas and electrolyte changes in human near-drowning victims. JAMA 203:337-343, 1968.

8. Fuller RH: Drowning and the postimmersion syndrome: a clinicopathologic study. Mil Med 128:22-36, 1963.

9. Munroe WD: Hemoglobinuria from near-drowning. J Pediatr 64:57-62, 1964.

10. Giammona ST, Modell JH; Drowning by total immersion. Effects on pulmonary surfactant of distilled water, isotonic saline, and sea water. Am J Dis Child 114: 612-616, 1967.

11. Ruiz BC, Calderwood HW, Modell JH, et al: Effect of ventilatory patterns on arterial oxygenation after near-drowning with fresh water: a comparative study in dogs. Anesth Ann 52:570-576, 1973.

12. Modell JH, Calderwood HW, Ruiz BC, et al: Effects of ventilatory patterns on arterial oxygenation after near-drowning in sea water. Anesth 40:376-384, 1974.

13. Rutledge RR, Flor RJ: The use of mechanical ventilation with end-expiratory pressure in the treatment of near-drowning. Anesth 38:194-196, 1973.

14. Van Haeringen JR, Blokzijl EJ, van Dyl W, et al: Treatment of the respiratory distress syndrome following nondirect pulmonary trauma with positive end-expiratory pressure with special emphasis on near-drowning. Chest (Suppl) 66:30S-34S, 1974.

15. Sladen A, Zauder HL: Methylprednisolone therapy for pulmonary edema following near-drowning. JAMA 215:1793-1795, 1971.

16. Bannister WK, Sattilaro AJ: Vomiting and aspiration during anesthesia. Anesth 23:251-264, 1962.

17. Bannister WK, Sattilaro AJ, Otis RD: Therapeutic aspects of aspiration pneumonitis in experimental animals. Anesth 22:440-443, 1961.

18. Hamelburg W, Bosomworth PB: Aspiration Pneumonitis. Springfield, Ill, Charles C Thomas, 1968.

19. Fuller RH: The clinical pathology of human near-drowning. Proc Roy Soc Med 56:33-38, 1963.

20. Giammona ST: Drowning: pathophysiology and management. Curr Probl Pediatr 1(7):1-33, 1971.

The authors, Department of Pediatrics, The University of Texas Medical Branch, Galveston, TX 77550.

Uncommon insect bites: the reduviid bite

Glenn R. Hunt, MD

The family Reduviidae is a relatively common cause of severe insect bite reactions although it is seldom recognized as such. The presenting symptoms cover a wide spectrum of complaints and are often confused with similar medical diseases. We feel that the allergic and toxic reactions to a reduviid bite are sufficiently common to warrant a review of the subject.

There are more than 4,000 different species in the family Reduviidae, order Hemiptera, which consists of predacious insects with elongated, piercing, feeding mouth parts. For practical purposes we have divided the family into two groups. First are the "assassin bugs" and "wheel bugs" which do not usually feed on man but defend themselves with a piercing bite. Second is the "kissing bug," a blood feeder that often chooses man as a source of nourishment.

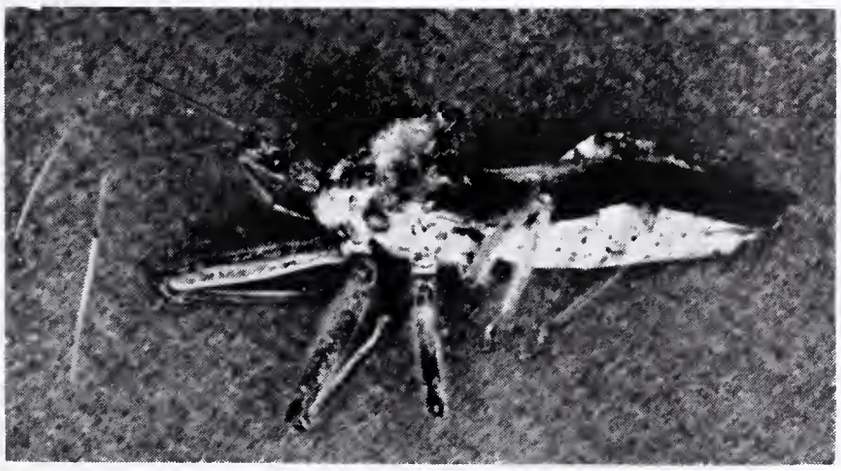
The assassin bugs and wheel bugs (Fig 1) are predacious insects, primarily feeding on other soft-bodied insects. They have not been known to feed on man. However, when disturbed or handled, they may inflict a painful wound. It is generally agreed that the bites of all reduviids other than the triatomids are uniformly painful. The most common offender is the "wheel bug," *Arilus cristatus*.[1]

The wheel bug inflicts a painful bite and erythema and induration develop. The inflammation may become chronic and produce lesions resembling papillomas at the site of the bite. The papillomas may be present for several months.[2] Because *Arilus* primarily bites in self-defense, the victim is exposed to minimal amounts of venom, enzymes, and other complex chemical products. Allergic manifestations of the wheel bug bite are rare. If they occur, however, they usually follow the same reaction patterns noted in the *Triatoma*.

The kissing bugs, genus *Triatoma* (Fig 2), feed only on the blood of vertebrate animals. There are at least 15 species of the insect found in the southern United States. They range from dark brown to black and may exhibit checkerboard coloration of the trailing edges. They hide easily in crevices, debris, and clothing. Typically, they nest close to a source of blood such as bird or rodent nests, barns, and houses.

Feeding is done at night. The insect seldom stands on the host. Rather, it stands

1. The wheel bug, Arilus cristatus. *Note the cogwheel extension on the dorsum of the thorax.*



beside the host. The proboscis contains four stylets, one of which makes the actual penetration of the skin. Shields and Walsh[3] describe the bite as painless; only a slight tickling sensation was noted. Engorgement requires approximately ten minutes. There are usually multiple bite sites which may be grouped or scattered. Shields and Walsh report in their feeding experiments that they did not observe any bites through clothing.

After feeding, the insects retreat to an area of cover. They usually will not feed again for several days although they can survive several months without a meal. In warm climates the kissing bug lives through the winter and feeds the year round.

2. *The kissing bug,* Triatoma.

There is clinical evidence to indicate that not all *Triatoma* bites are painless. We postulate that *Triatoma* can inflict a painful piercing wound if disturbed. We also feel that inadvertent or hasty withdrawal of the mouth parts may be painful.

The *Triatoma* bite produces several separate and distinct reactions. There are many enzymes associated with the feeding process which contribute to the variety of reactions seen in the *Triatoma* bite. There is evidence that prior exposure to reduviid bites results in development of antibodies which are responsible for the wide spectrum of severity seen as presenting complaints. Many of our patients with more severe reactions give a positive history of known bites in the past. Balazuc reported increasingly severe reactions following deliberate exposure to *Triatoma* bites during a two-year period.[4]

Shields and Walsh have divided the common reactions into four broad categories:

1. Papular lesions with a central punctum, usually similar to but more severe than ordinary insect bites.

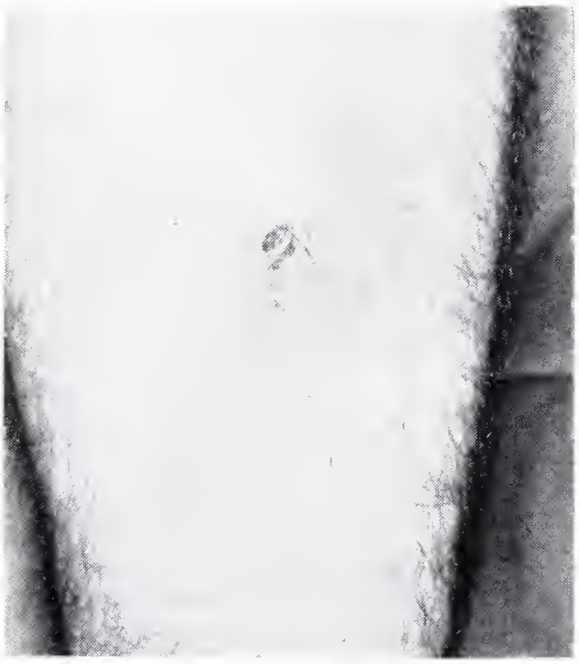
2. Grouped small vesicles with moderate swelling and redness but no definite punctum. These vesicles may be hemorrhagic.

3. Giant urticarial type lesions which may or may not have a central punctum. These may be many centimeters across. The urticaria may occur at the site of the bite or may present as a generalized urticarial reaction (Fig 3).

4. Hemorrhagic nodular-to-bullous lesions on the hands or feet. This lesion is commonly confused with spider bites and with erythema multiforme. We have observed that the hemorrhagic bullous le-

3. Urticarial reaction with central punctum.

4. Case 1, the "lower leg syndrome."



5. Case 2, original lesion following intralesional steroid therapy, Sept 29.

6. Case 2, lesion, Oct 10. Original lesion is 10 cm cephalad and healed over.

sions are a delayed type of reaction occurring several days after the bite.

Case 1 (Fig 4)

The patient, a 59-year-old woman, reported a "sharp" bite on the right ankle while she was eating, four days before coming to the hospital. She noted a "knot" at the puncture site that night. During the next three days, she noted progressive swelling and erythema. When seen at the hospital, she had dark discoloration of the skin over the ankle and multiple hemorrhagic vesicles. She also had a history of polycythemia vera.

The patient was admitted and treated with bed rest and antibiotics. With the elevation of the leg, the progression of the lesions shifted from a movement distally to a movement to the posterior portion of the leg. This gravity-dependent movement of the lesion strengthened the diagnosis of reduviid bite. She was dismissed ten days after the bite, improved, with instructions to continue bed rest and elevation of the leg.

This case illustrates the "lower leg syndrome" we have noted in patients with reduviid bites. The lesions develop progressively over several days, exhibiting a gravity-dependent distribution. The hemorrhage and vesiculation tends to settle toward the lowest areas. The lesions exhibit minimal response to drugs and are best treated by bed rest and elevation of the extremity. Bites on the ankle or lower leg exhibit the more severe reactions, possibly because circulatory stasis is more common to the lower leg.[2]

Case 2

A 29-year-old man came to the emergency room on Sept 25 for "possible spider bite." The patient did not recall any bite. He awoke one morning with swelling of the calf of the right leg. In the emergency room several days later, the swelling was approximately 25 cm in diameter. In the center of the lesion was an area described as "an abscess 3 cm x 4 cm." The diagnosis was "possible brown recluse spider bite," and the patient was treated with intralesional infiltration of long-acting steroids.

The patient returned Sept 29. The wound had decreased in size and was much less inflamed, and the patient was dismissed (Fig 5).

He returned Oct 10 with recurrence of the lesion (Fig 6). Interestingly, the lesion

7. Case 2, lesion following second course of intralesional steroids. The original wound is healing but subcutaneous hemorrhage is presented distally.

had moved distally 10 to 15 cm and was spread over a larger area. Instead of an abscess the primary lesion consisted of grouped bullae. The patient was again treated with intralesional steroids and released. Again, the wound improved (Fig 7).

On Nov 7 the patient presented with break-down of the site of the second infiltration (Fig 8), and drainage of serosanguinous fluid from the area. He was hospitalized and treated with bed rest, elevation of the leg, and antibiotics. The wound responded promptly and the patient was released three days later; the wound healed with no more difficulties (Fig 9).

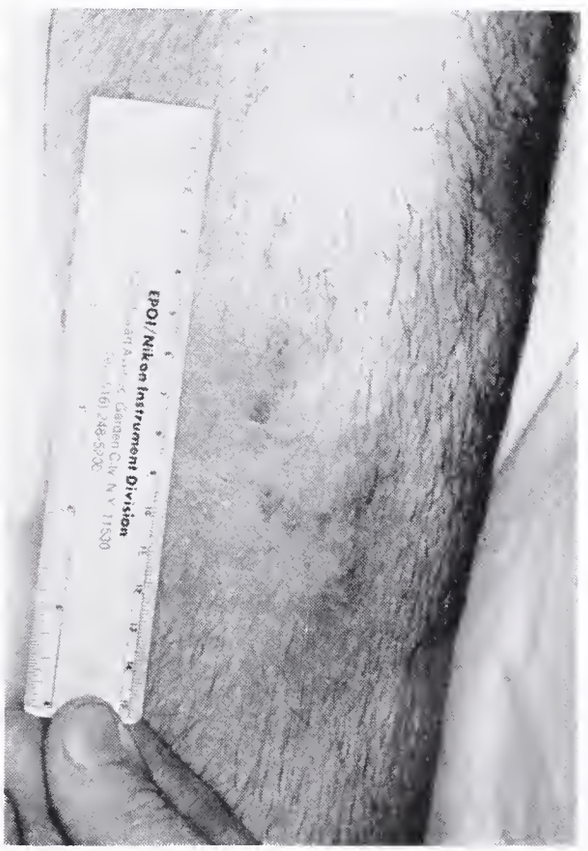
The treatment of reduviid bites consists primarily of symptomatic and supportive care. The urticaria and small vesiculation seems to respond well to steroids and antihistamines. In the case of secondary infections, proper antibiotic therapy should be used.

The treatment of the hemorrhagic bullous lesions of the lower leg consists of bed rest, analgesics, elevation of the leg, and antibiotics. We feel that the use of steroids in this particular lesion does not help and may well prolong the process. The hemorrhagic bullae act similar to a foreign body response and may represent solid foreign material left in the wound by the stylus. The resolution of this wound may depend on "flushing out" the foreign bodies by abscess formation and drainage.

An important element in the treatment is eradication of the insect from living

8. Case 2, breakdown of the lesion noted on Nov 7.

9. Case 2, healed lesion Jan 10. Patient returned to clinic for unrelated health problem.



areas by a thorough program of spraying or fumigation. Shields and Walsh[3] have observed that the use of DDT, pyrethrum, chlordane or lindane in recommended doses does not control the insect population. Benzene hexachloride has been used extensively in South America and is apparently successful.[5] Organophosphates are favored by exterminators and appear to be quite successful.

Summary

The family Reduviidae represents a common biting insect in the southern United States and may account for a variety of symptoms which may be confused with other disease processes.

Arilus cristatus, the "wheel bug," inflicts a painful bite which may form papilloma-like lesions that remain for several months.

The *Triatoma* species are painless feeders. The bites may cause allergic reactions including papular lesions, grouped small vesicles, urticaria, and hemorrhagic bullous lesions.

The treatment is symptomatic, with the symptoms essentially being self-limited. With more severe reactions, an attempt should be made to eradicate the insect from the living areas of the house.

It is important to include this entity in differential diagnosis because it requires only rest for a "cure." By proper diagnosis, the use of painful and possibly harmful modes of treatment can be avoided.

References

1. Smith FD, Miller NG, Carnazzo SJ, et al: Insect bite by *Arilus cristatus* a North American reduviid. Arch Dermatol 77:324-330, 1958.

2. Hall MC: Lesions due to bite of wheel-bug, *Arilus cristatus* (Hemiptera; Reduviidae). Arch Intern Med 33: 513-515, 1924.

3. Shields TL, Walsh EN: "Kissing bug" bite. Arch Dermatol 74:14-21, 1956.

4. Balazuc J: Anaphylactic phenomenon caused by triatoma bite. An Inst Med Reg 3:35-37, 1950.

5. Frazier CA: Insect allergy: allergic and toxic reactions to insects and other arthropods. Green Inc, St Louis, 1969.

Dr Hunt, Scott and White Clinic, Temple, TX 76501.

A current view of acute rheumatic fever

William W. Pinsky, MD; Karen M. Pinsky, MPH; Dan G. McNamara, MD

Acute rheumatic fever is an old disease that is responsible for much morbidity and mortality secondary to cardiac dysfunction.

Means of preventing rheumatic fever are readily available yet the disease still occurs in significant numbers. It is the medical communities' responsibility to deliver adequate care to all members of society—diagnosing, treating and preventing rheumatic fever.

Defining Rheumatic Fever

Acute rheumatic fever is an old disease that has plagued societies for centuries. Even as early as 400 BC, Hippocrates studied acute polyarthritis and described it as "a migratory pain and swelling of the joints, the result of the disruption of humoral flow."[1] It was not until 1616 that Guillaumme de Baillou, the "father of rheumatism," used the term *rheumatism* to differentiate arthritis from gout.[2] Later in the 17th century, Thomas Sydenham noted an association between "rheumatism" and geographical, seasonal, and age variables.[3] Even though Sydenham also described chorea, he failed to recognize the association of chorea with "rheumatism." In the next century, Jenner and Pitcarin observed a relation between "rheumatism" and heart disease.[4]

With the onset of cardiac examination with the stethoscope, Jean-Baptiste Bouilland documented the change in heart sounds and cardiac enlargement following acute articular rheumatism. He also redefined endocarditis as an important manifestation of the rheumatic state rather than a complication of the disease.[5] Late in the 19th century, Haig-Brown described the existence of a latent period between "sore throat" and the development of rheumatic symptoms.[6]

Sir Arthur Newsholme[7] presented the first epidemiological study of rheumatic fever in his Milroy Lectures. Newsholme described rheumatic fever as a febrile disease caused by a pathogenic microorganism. Other observations resulting from Newsholme's studies include: (1) rheumatic fever occurs mainly in the temperate climates; (2) stress may contribute to the development of the disease; and (3) epidemics of rheumatic fever seem to occur in years characterized by high incidence of pharyngitis. Newsholme's final observation that rheumatic fever seems to have a high incidence in years when pharyngitis is prominent set the stage for the research of the 20th century, the search for the etiology of rheumatic fever.

The earliest rheumatic fever research recorded in this century was recorded by a histologist, Ludwig Aschoff, who described the specific lesion of the disease that affects the myocardium.[8] Following Aschoff's discovery, a number of researchers described their efforts to isolate the cause and the agent of rheumatic fever. During the 1920s, Poynton and Paine isolated a strain of *Streptococcus viridans* which was, unfortunately, destroyed by German bombing in World War II. During the same period, Swift described the role of hypersensitivity in predisposition to the rheumatic state.[9]

Because of the agglutination response in the sera of rheumatic patients, Schlessinger, Sabin, and others were led to believe that rheumatic fever had a viral etiology.[10]

Identifying Rheumatic Fever

During the early 1930s, researchers focused primarily on the epidemiology of the disease. Schlessinger, Collis, and Coburn

reported multiple cases of rheumatic fever following outbreaks of scarlet fever and tonsillitis in boarding schools and other closed communities.[11]

In spite of increased research in rheumatic fever, evidence supporting the strong association between pharyngitis and rheumatic fever or the isolation of its causative agent remained undiscovered. It was in 1940 that Rebecca Lancefield differentiated beta hemolytic streptococci into several distinct groups.[12] She found that the middle layer of the cell wall of beta hemolytic streptococci is composed largely of polysaccharide, an antigenic substance, which provides the basis for serotyping of the organism. It is estimated that group A causes more than 90% of human streptococcal infections. Lancefield further subdivided these streptococcal strains according to the three proteins contained in the outer layer of the cell wall. The most important of the three, the M protein, represents the virulence factor in beta hemolytic streptococci and provides the basis of serotyping the group A strains. The M antigen of each serotype stimulates antibody production conferring the long-lasting, possibly life-time immunity to the particular type which caused the infection. The significance of Lancefield's research becomes evident from two major applications:

1. Classification of group A streptococci by serotype provided the basis for epidemiological studies of human streptococcal infection.

2. This research helps to explain the recurrence of streptococcal pharyngitis and the development of hypersensitivity reactions to streptococcal antigens in man.

During World War II, researchers were able to further explore the association between group A streptococcal infections and rheumatic fever. Epidemiological studies of military populations, characterized by high incidences of rheumatic fever following streptococcal pharyngitis and scarlet fever, led to documentation of the relation between the precursor and the disease.[14] Rammelkamp and his associates concluded that epidemiological factors associated with rheumatic fever (for example, altitude, crowding, economic factors, and age) are significant only as they relate to a preceding streptococcal infection that initiated the attack of rheumatic fever.[14]

Diagnosis

It has long been recognized that acute rheumatic fever appears in different forms depending upon (1) the system involved (either the heart, joints, central nervous system, or certain combinations of these), and (2) the degree of involvement as determined by age of the patient, extent of the preceding streptococcal infection, and the patient's peculiar and characteristic hypersensitivity reaction to streptococcal antigens.

Jones[15] was the first to systematically separate major and minor manifestations of the rheumatic state. This classification, properly applied, serves not only to increase the clinical recognition of rheumatic fever but to avoid overdiagnosis in the nonrheumatic fever patient who had similar symptoms. The meaning of "major" and "minor" in this classification is sometimes misunderstood. The student of rheumatic fever is led to understand that the diagnosis is made by identifying one major and two minor manifestations, or two major and one minor manifestation, and somehow the notion is implied that three or four minor manifestations equal one major!

"Major manifestations" simply implies the *form* in which the rheumatic state occurs in a patient, be it arthritis, carditis, both arthritis and carditis, or Sydenham's chorea. Very rarely, chorea may occur in combination with either joint or heart involvement. While Jones included subcutan-

eous nodules and erythema marginatum as major manifestations (presumably because both phenomena rarely occur in diseases other than rheumatic fever) it is doubtful if he would include them as such today. Neither appears as the primary (or "major") manifestation of the rheumatic state. Both the nodules and the distinctive skin rash invariably accompany one of the major forms of the disease, namely arthritis, carditis, or chorea.

"Minor manifestations" include fever, arthralgia, previous history of acute rheumatic fever or rheumatic heart disease, increased erythrocyte sedimentation rate, positive C-reactive protein, and prolonged PR interval on the electrocardiogram. Epistaxis and abdominal pain may also be helpful in establishing a diagnosis.

Probably only about 25% of the patients at the time of diagnosis of acute rheumatic fever will have positive results of bacteriological studies demonstrating group A beta hemolytic streptococcus. Therefore, the identification of recent streptococcal infection lies in the immunological basis. The most common and the most useful of the immunological tests is the antistreptolysin-O titer. A rise or fall of two tube dilutions would be significant in establishing the recent occurrence of a streptococcal infection. Generally, 75-80% of patients with a recent streptococcal infection will demonstrate this. There is usually a rise within one to two weeks of infection and it reaches a maximum at about three to five weeks following infection. The patient who has been treated with penicillin can have a modified response to the antistreptolysin-O test. Frequently, a battery of streptococcal immunological tests are run, including the aforementioned antistreptolysin-O, antihyaluronidase, antistreptokinase, anti-DNAse B, and the anti-NADASE test. If three of these assays are run, generally 95% of patients with a recent streptococcal infection will show a titer rise as a result of at least one of these tests.

In looking for evidence of an inflammatory process, one generally looks for abnormalities in the erythrocyte sedimentation rate and C-reactive protein test. Other miscellaneous laboratory data that are used include heart antibody, serum gamma globulin, serum glutamate oxylate transaminase, and hemotocrit values. The roentgenogram can be helpful if there is ongoing carditis in which one will see an increasing cardiothoracic ratio and possibly effusion. The electrocardiogram can show conduction disturbances or QRS/T wave abnormalities as seen in myocarditis or pericarditis.

In the differential diagnosis of acute rheumatic fever, if there is primarily joint involvement the entities that one will have to differentiate include: (1) rheumatoid arthritis, (2) systemic lupus erythematosus, (3) Henoch-Schönlein purpura, (4) serum sickness, (5) sickle cell disease, (6) septic arthritis, (7) leukemia, and (8) subacute bacterial endocarditis. In those with primarily cardiac involvement, differential diagnoses would include: (1) innocent murmur, (2) myocarditis other than rheumatic in origin, (3) pericarditis other than rheumatic in origin, and (4) congenital heart disease.[10]

Occurrence of Rheumatic Fever

One would think that with the great strides made in this country in diagnosis and treatment of streptococcal infections, rheumatic fever would become an obsolete disease much in the same way that tuberculosis has. However, reports from around the country still indicate a high incidence of rheumatic fever. To achieve an idea of its occurrence in the southwest area, all hospital admissions from Jan 1, 1965 through Dec 31, 1974, to Ben Taub General Hospital in Houston were reviewed.

During this period, 83 patients were identified as having a first attack of acute rheumatic fever, including 49 males and 34 females.Sixty-five were black, 13 were white, and 5 were of Hispanic origin. The peak months of occurrence were October to February, with a trough in June. There was a range of 5 to 15 patients per year, with a peak incidence in 1969. The range of ages was 3 to 29 years, with a mean of 10.72. There were three deaths in the ten years; one in the acute period and two later in the course following cardiovascular surgery.

Presenting Symptoms: Whereas the main symptom at admission was arthralgia, 48.2% of the patients had a recent history of upper respiratory infection. However, a significant number of patients had complaints of abdominal pain with or without fever or arthralgia. Only 16.9% presented with history of antibiotic therapy.

Sociological: The average income of families with affected members was $349 per month while the average income of all families in Harris County during this period was almost 2½ times that amount. The average number of household members was 7.14 compared to a county average of 3.21. There were 13.3% of the patients who had a first- and second-generation family history suggestive of rheumatic fever.

Physical Signs: Of all patients, 45.6% exhibited carditis in some form while 80% had some joint involvement. Only 1.2% had evidence of involuntary movement. There were no patients identified with erythema marginatum or subcutaneous nodules.

Hospital Course: All of the patients were admitted to the hospital via the pediatric clinic, medical clinic, or emergency room of Ben Taub Hospital. The patients under age 14 were admitted to the pediatric ward and the others to the adult medical floor. The average length of hospital stay was 28 days for all patients. Those with carditis stayed 32.8 days, and those without, 18.5 days. No definite therapy protocol was followed, however, the trend was to treat those with arthritis, chorea, and/or asymptomatic carditis with aspirin alone, 100 mg/kg/day. Those patients with symptomatic carditis received prednisone, 60 mg/sq m/day. There were three deaths in this period, an incidence of 4%.

Recurrence and Follow-up: The average length of follow-up during this ten-year period was 3.83 years, with a range of 1 month to 9 years; 39% were eventually lost to follow-up; 19% were readmitted during this same decade with actual recurrences. For recurrent cases, the average length of time from the time of discharge to the time of readmission was 15.2 months. However, 75% of all recurrences occurred less than one year from discharge, an average of 3.25 months. All patients had been discharged from the hospital with regimens of prophylaxis, and 90% of them were to receive monthly injections.

These figures reflect the minimum occurrence of rheumatic fever in Harris County since some charts were probably miscoded. In addition, a few such cases probably were admitted to the peripheral private hospitals during this time.

However, our figures do reflect a similar incidence to what has been reported in the United States. We have recorded an incidence of carditis of 45.7% which is similar to Brownell's 43% in 1963[16] and Mayer's[17] 38.4% in 1958, but lower than McCue's 60.5% in Virginia.[18] With a recurrence rate of 19.3%, we found a higher incidence than Brownell's less-than-14%[16] (postantibiotic prophylaxis era), and Roth's 50% in 1937[19] (preantibiotic prophylaxis). While Brownell reported a recurrence rate (after the first attack) of 14% and Roth, 44%, our study revealed a recurrence rate of 75%. All individuals who had recurrences in the

Houston study had missed at least one monthly injection of penicillin prior to recurrence. It is suggestive that the lack of compliance in arranging to receive the penicillin contributes to the early high rate of recurrence.

Although the actual incidence of initial and recurrent attacks of rheumatic fever has probably decreased over the past few decades, it still does exist in significant numbers. At a time when one should be concerned with the use of resources and the "epidemic of shortages," it becomes apparent that a preventable disease such as rheumatic fever must be checked.

Conclusion

Although there is not yet a vaccine available for the prevention of group A beta streptococcal infections, mass screening, through schools and neighborhood clinics, of the high-risk groups is possible. Gordis has described the value of comprehensive care programs in areas of Baltimore where the incidence of rheumatic fever was one-third lower than for the rest of Baltimore.[20]

It is the responsibility of the medical community to: (1) deliver adequate medical care to all members of society, (2) adequately diagnose and treat all streptococcal infections, and (3) provide adequate follow-up care and prophylaxis to prevent recurrences of rheumatic fever. It is only through these efforts that acute rheumatic fever and residual rheumatic heart disease can become an obsolete disease in our society.

References

1. de Baillon G: Liber de rheumatismo. Opera Mediea Quinia, p 314, 1662.

2. Murphy GE: William Osler Medal essay; evolution of our knowledge of rheumatic fever; historical survey, with particular emphasis on rheumatic heart disease. Bull Hist Med 14:123-147, 1943.

3. Sydenham T: Of a rheumatism, the whole works of that excellent practical physician Dr. Thomas Sydenham. Translated from Latin by John Pechecy, p 200, London, 1701.

4. Keil H: Note on Edward Jenner's lost manuscript on "Rheumatism of Heart." Bull Hist Med 7:409-411, 1939.

5. Bouillard JB: New researches on acute articular rheumatism, Paris, 1832. Translated by J. Kitchen, pp 12, 15, 66, 67, Philadelphia, Hoswell, Barrington, 1937.

6. Haig-Brown C: Tonsillitis in adolescents. Bailliere, Tedoll and Cox, London, 1886.

7. Newsholme A: The Milroy Lectures on the natural history and affinities of rheumatic fever. Lancet 1:489-657, 1895.

8. Aschoff L: Zur Myocarditisfrage. Verb Dtsch Ges Pathol 8:46-51, 1904.

9. Waksman BH: Etiology of rheumatic fever. Medicine 38:143,1959.

10. Markowitz M, Gordis L: Rheumatic fever. Philadelphia, WB Saunders, 1972.

11. Coburn AF: The factor of infection, in the rheumatic state. Baltimore, Williams and Wilkins, 1931.

12. Lancefield RC: Specific relationships of cell composition to biological activity of hemolytic streptococci. Harvey Lect 36:251, 1940-41.

13. Stollerman GH: Rheumatic fever and streptococcal infection. Grune and Stratton, 1975.

14. Rammelkamp CH, Denny, FW, Wannamaker, LW: Studies on the epidemiology of rheumatic fever in the armed services, in: Thomas L (ed): Rheumatic fever. Minneapolis, Univ Minn Press, p 72-89, 1952.

15. Jones TD: Diagnosis of rheumatic fever. JAMA 126:481-484, 1944.

16. Brownell KD, Bailen-Rose F: Acute rheumatic fever in children. Incidence in a borough of New York City. JAMA 224:1593-1597, 1973.

17. Mayer FE, et al: Declining severity of first attack rheumatic fever. New Eng J Med 289:331, 1973.

18. McCue CM, Robertson LW, Eldredge WJ, et al: Acute rheumatic fever in Virginia—has it changed in the last 20 years? Virginia Med Monthly 97:273-281, 1970.

19. Roth IR, Lingg C, Whittemore A: Heart disease in children; rheumatic group; certain aspects of age at onset and of recurrences in 488 cases of juvenile rheumatism ushered in by major clinical manifestations. Am Heart J 13:36-60, 1937.

20. Gordis, L: Effectiveness of comprehensive-care programs in preventing rheumatic fever. New Eng J Med 289(1):331-335, 1973.

From the Department of Pediatrics, Section of Cardiology, Baylor College of Medicine, Houston.

The authors, Section of Pediatric Cardiology, Texas Children's Hospital, 6621 Fannin, Houston, TX 77030.

Reprint requests to Dr Pinsky.

Supported in part by grant No. HL-5756 from the National Institutes of Health, USPHS, and by USPH grant RR-00188 from the General Clinical Research Branch, National Institutes of Health.

Fever of unknown origin: a prospective study of 100 patients

One hundred patients with "fever of unexplained origin" (FUO) were evaluated in a prospective fashion, using comprehensive physical, laboratory, and roentgenographic examinations. An etiologic diagnosis was established in 95 cases, representing 34 separate diagnostic entities. Malignant lymphoma, intra-abdominal abscesses, and inadequately treated bacterial infection were the most common causes of FUO. The prognosis for the patient with FUO depends on the underlying disease, an accurate diagnosis, and prompt institution of appropriate therapy.

In 1961, Petersdorf and Beeson[1] reported a series of 100 cases of "fever of unexplained origin" (FUO) collected during the 1950s. These patients had a febrile illness that lasted for more than three weeks and was undiagnosed after one week of hospitalization. Subsequently, smaller series have been reported from the Cleveland Clinic[2] and the University of Florida.[3]

Each of these reports emphasized the etiologic roles of occult infection, malignant neoplasia, and collagen-vascular-hypersensitivity disease in prolonged febrile illnesses. However, the relative importance of each of these conditions varied considerably among the different patient populations studied.

Present Study

In 1969 we began a prospective study of all patients admitted to the medical service at Scott and White Memorial Hospital for investigation of FUO. The purposes of this study were to determine the causes of FUO in a population of patients evaluated in a nonuniversity medical center and to evaluate the procedures most efficacious in diagnosis and therapy of these conditions.

For inclusion in this study, the criteria were (1) temperature more than 38.3 C (101 F) documented on several occasions, (2) overall duration of illness more than three weeks, (3) no previously known underlying illness, and (4) diagnosis unknown at the time of initial consultation. Patients less than 14 years old were excluded. One hundred patients met these criteria in the five-year period of the study. The age, sex, and racial distributions of the group corresponded to those of the general patient population seen at our institution.

Each patient was evaluated according to a standard protocol that included complete history and physical examination, bacteriologic and serologic studies, and roentgenographic examinations. When indicated, biopsies and exploratory laparot-

1. Causes of fever of unknown origin in 100 cases.

Cause	Cases (No.)
Infection	37
Malignancy	31
Collagen-vascular-hypersensitivity disease	19
Miscellaneous	8
Self-limited	4
No diagnosis	1

2. Infections associated with cases of fever of unknown origin.

	Cases (No.)
Bacterial endocarditis	9
Intra-abdominal abcess	9
Hepatobiliary infection	7
Pyelonephritis	4
Miliary tuberculosis	3
Brucellosis	1
Disk space infection	1
Bronchiectasis	1
Chronic meningitis	1
Granulomatous lymphadenitis	1

Paxton Howard, Jr, MD
H. Herbert Hahn, MD
Robert L. Palmer, MD
William J. Hardin, MD

omies were performed. The diagnostic efficiency of this protocol has been described elsewhere.[4,5]

Results

A definite diagnosis was established in 95 cases (Fig 1). No diagnosis was established in five cases; in four of these, the patient's fever subsided during the course of evaluation without treatment and these were assumed to be self-limiting illnesses. One patient remained without a diagnosis during a six-week hospitalization, despite a laparotomy and several therapeutic trials of antibiotics; his fever eventually subsided, but he was lost to follow-up and we are not certain of the cause of his illness.

Infection

Among the 37 infections (Fig 2) were 9 cases of bacterial endocarditis that had gone unrecognized prior to our examination of the patient, either because blood cultures had not been obtained or because prior antibiotic therapy had temporarily inhibited the bacteremia. Most of the nine cases with intra-abdominal abscesses were secondary to inflammatory conditions of the bowel (appendicitis, diverticulitis, or ileitis) or to abdominal or pelvic surgery that had been performed some months previously. Empyema of the gallbladder, intermittent cholangitis, and intrahepatic abscess (seven cases) were especially difficult to diagnose in the elderly. The four patients with pyelonephritis in this series had significant bacteriuria and physical and roentgenographic signs of upper tract infection; they responded to specific antibiotic therapy.

Three cases of miliary tuberculosis were diagnosed. One case was found, by culture, at autopsy; the two other cases were in elderly patients who had the pattern of miliary granulomas on their thoracic roentgenograms and who had a prompt response to antituberculosis therapy. There was one case each of brucellosis, disk space infection, bronchiectasis, chronic meningitis, and granulomatous lymphadenitis. The etiologic agent in the last two could not be identified by cultural, microscopic, and serologic studies. The cases of brucellosis was diagnosed serologically.

The outcome in this group of infections was relatively good: 28 patients were cured, and only 2 died of their basic disease.

Malignancy

Malignant neoplasms were the cause of FUO in 31 cases (Fig 3). The malignant lymphomas were the largest single diagnostic entity in this series, and the 20 cases occurred in all age groups and mimicked many other conditions. Diagnosis of lymphoma was established by peripheral lymph node biopsy in 12 cases, at laparot-

3. Malignancies associated with cases of fever of unknown origin.

	Cases (No.)
Lymphoma	20
Leukemia	3
Sarcoma	2
Carcinoma, primary unknown	2
Carcinoma of kidney/ureter	2
Carcinoma of colon	1
Carcinoma of lung	1

4. Collagen-vascular-hypersensitivity diseases associated with cases of fever of unknown origin.

	Cases (No.)
Systemic vasculitis	5
Temporal arteritis	3
Lupus erythematosus	3
Felty's syndrome	2
Erythema multiforme	2
Wegener's granulomatosis	1
Juvenile rheumatoid arthritis	1
Polymyalgia rheumatica	1
Hypersensitivity to vaccine	1

omy in 7, and at autopsy in 1. Thus, the lymphoma was intra-abdominal, with no peripheral nodes, in 8 of these 20 cases and in 2 cases it was confined to the spleen.

The three cases of leukemia were "aleukemic" acute myelomonocytic leukemia. In each case, leukopenia and anemia led to bone marrow examination which established the diagnosis.

Localized intra-abdominal carcinoma occasionally is a cause of fever. In this series, only one hypernephroma and one colon carcinoma were discovered while still localized and potentially curable at the time of diagnosis.

Despite the progress made in therapy of malignancies, the outcome in this group was poor: 23 of the 31 patients with malignancy are known to be dead of their disease, and only 1 is presumed to be cured.

Collagen-Vascular-Hypersensitivity Diseases

Collagen-vascular-hypersensitivity diseases were the cause of FUO in 19 cases (Fig 4). A distinct female preponderance was noted in this group (15 females and 4 males). All of the patients with temporal arteritis or polymyalgia rheumatica were women more than 67 years of age.

Diagnosis was established by biopsy of skin, artery, or kidney, by antinuclear antibody test, and by clinical course. The outcome in this group was relatively favorable—only three patients are known to be dead of their disease.

5. Miscellaneous causes of fever of unknown origin.

	Cases (No.)
Granulomatous ileocolitis	4
Drug fever	2
Antibiotic-induced colitis	1
Alcoholic hepatitis	1

Miscellaneous

The eight miscellaneous causes of FUO are listed in Fig 5.

Discussion

Our experience with these 100 patients emphasizes the value of a systematic, comprehensive protocol for diagnostic evaluation of FUO.[4] Daily physical examination, searching for lymphadenopathy, heart murmur, or an abdominal mass, is mandatory. Roentgenographic examination of the chest, kidney, gallbladder, stomach, small bowel, and colon should be performed. Isotopic liver scan and whole-body scan with gallium-67 have been very useful in detecting intra-abdominal infection and malignancy. Needle biopsy of the liver may be the only test to identify granulomatous hepatitis. Surgical biopsy of enlarged lymph nodes, inflamed arteries, or suggestive skin lesions should be performed early in the evaluation. Culture of blood, bone marrow, urine, and cerebrospinal fluid, when indicated, should be completed before antibiotic therapy is considered.

Exploratory laparotomy established a diagnosis in 22 patients in this series. Diagnostic laparotomy should be considered if the patient is deteriorating and laboratory or physical signs suggest an intra-abdominal process that cannot be diagnosed by less invasive methods.[5-7]

Most infectious causes of FUO are due to organisms from the patient's internal environment. Bacterial endocarditis, hepatobiliary infection, and intra-abdominal abscesses were our most commonly encountered infections. In contrast to earlier studies, tuberculosis, brucellosis, typhoid, and rheumatic fever are uncommon causes of FUO in our population. For example, Petersdorf and Beeson[1] reported an 11% incidence of tuberculosis in their series representative of FUO cases in an urban setting in the 1950s. The three cases of tuberculosis in our se-

ries illustrate the decreasing incidence of this infection in our hospital population. In addition to tuberculosis, Texas physicians must continue to be alert to histoplasmosis and coccidioidomycosis, which are endemic in certain areas of the state.Recent reports in this journal have emphasized local outbreaks of brucellosis,[8] rheumatic fever,[9] and psittacosis[10] in special environmental settings.

The malignant lymphomas were often the most occult cause of FUO, being confined to intra-abdominal lymph nodes or the spleen. Newer diagnostic procedures including gallium scanning, lymphangiography, and exploratory laparotomy allow earlier diagnosis of intra-abdominal lymphoma than was possible in previous FUO series. Improved therapy of the lymphomas should improve the prognosis of patients with this disorder. Renal cell carcinoma is a notorious cause of FUO and is often surgically curable when detected early.[11] Our most recent hypernephroma was detected by gallium scan while still surgically resectable.

Collagen-vascular-hypersensitivity diseases have been found in 15 to 20% of various FUO series. Fever is rarely the sole manifestation of disease in this group. Overlapping syndromes including manifestations of arthritis, polyserositis, rashes, arteritis, nephritis, anemia, neutropenia, and polymyositis may accompany fever and make precise categorization difficult. The polymyalgia rheumatica-temporal arteritis complex is a common and subtle cause of FUO in elderly women. These patients respond dramatically to treatment with adrenal corticosteroids.

Miscellaneous causes of FUO in previous series have included thyroiditis, sarcoidosis, pulmonary embolization, factitious fever, granulomatous hepatitis, and chronic active hepatitis. Similar patients have been identified at this institution in approximately the same low incidences as elsewhere. The Petersdorf and Beeson[1] series included five cases of periodic disease as a result of their interest in this rare disorder. Periodic disease would be uncommonly encountered in the average patient population in Texas.

In this series, 34 separate disease processes were found to cause FUO in 100 patients. The evaluation and care of these patients requires the cooperation of an experienced medical and surgical team supported by sophisticated laboratory diagnostic facilities. We think that these evaluations should be carried out only in the larger medical centers where the necessary diagnostic and therapeutic facilities are available.

Our success in identifying the cause of fever in 95% of patients in this series is somewhat better than that in previous series (62 to 93%) and is attributable to improved diagnostic procedures and the experience gained in dealing with a larger number of fever evaluations according to a standard protocol.[4]

References

1. Petersdorf RG, Beeson PB: Fever of unexplained origin: report on 100 cases. Medicine 40:1-30, 1961.
2. Sheon RP, Van Ommen RA: Fever of obscure origin. Diagnosis and treatment based on a series of sixty cases. Am J Med 34:486-499, 1963.
3. Deal WB: Fever of unknown origin. Analysis of 34 patients. Postgrad Med 50:182-188, 1971.
4. Howard PH Jr, Hahn HH, Palmer RL, et al: Diagnostic evaluation of patients with fever of unknown origin. South Med J 69:933-934, 1976.
5. Howard PH Jr, Hardin WJ: The role of surgery in fever of unknown origin. Surg Clin North Am 52:397-403, 1972.
6. Geraci JE, Weed LA, Nichols DR: Fever of obscure origin; the value of abdominal exploration in diagnosis; report of seventy cases. JAMA 169:1306-1315, 1959.
7. Keller JW, Williams RD: Laparotomy for unexplained fever. Arch Surg 90:494-498, 1965.
8. Lerro SJ: Epidemiology 1960-1969. Human brucellosis in Texas. Tex Med 67:60-66 (Oct), 1971.
9. Barnert AL, Terry EE, Persellin RH: Acute rheumatic fever in adults. JAMA 232:925-928, 1975.
10. Dickerson MS, Bilderback WR, Pessarra LW: Ornithosis (chlamydiosis) outbreaks in Texas. Tex Med 72: 57-61 (Jan), 1976.
11. Cronin RE, Kaehny WD, Miller PD, et al: Renal cell carcinoma: unusual systemic manifestations. Medicine 55:291-311, 1976.

The authors, Scott and White Clinic, Temple, TX 76501.

Luetic labyrinthitis

Jack D. Clemis, MD

Syphilis, like many other systemic diseases, can adversely affect inner ear function. The otologist, therefore, needs a general understanding of this disease and its diagnosis, as well as a specific knowledge of its adverse effects on cochleovestibular systems. The theme of this article lies in diagnosis of the disease in general, then specifically as it focuses upon the inner ear.

While serologic techniques are the key to disease diagnosis, these tests are not absolute, and interpretation must be subject to a variety of conditions. A positive serologic test for syphilis does *not* necessarily establish the diagnosis nor does a negative test rule it out. Unqualified acceptance of positive serologic tests could, therefore, label a patient in error, subjecting him to unnecessary treatment and psychosocial trauma. Conversely a false-negative test could result in the withholding of treatment that may have arrested the disease. Both errors are disastrous. Becker recently studied 21 patients with cochleovestibular dysfunction and a positive serologic test for syphilis. In only half could he support the diagnosis of luetic labyrinthitis.

Once the diagnosis of syphilis has been established, the otologist must differentiate whether it is causative and related, or coexistent and unrelated to any cochleovestibular dysfunction that may be present. This is a difficult task that we have attempted to answer by examining perilymph aspirates for the presence of *Treponema pallidum*.

Serologic Tests for Syphilis

The following material is neither new nor original and merely represents a review of currently available information for the otologist.[1-6] Obviously the best way to identify an infectious disease is to isolate and identify the etiologic agents. The elusive *T pallidum*, however, especially in later stages of syphilis, makes this requirement impractical, forcing clinical reliance on indirect serologic presumptive evidence. Immunologic tests are of two types: nontreponemal and treponemal. The nontreponemal tests are IgG mediated, are nonspecific, and are most frequently used for screening purposes. The VDRL (Venereal Disease Research Laboratory) is most commonly used in this country. It is a flocculation test demonstrating antibodies (reagin) that have developed in response to the interaction between *T pallidum* and host cells. Reagin can be quantified and varies in relation to the degree of the host-pathogen interaction. A rising titer may, therefore, indicate recent infection, reinfection, or relapse while successful treatment reduces reagin and the VDRL test may revert to nonreactive. Nontreponemal tests, therefore, can be useful indicators of therapeutic responsiveness, but their nonspecific quality makes them much less efficient for diagnosis than treponemal tests. False negative (FN) responses occur in early cases where reagin has not yet developed and in 20-30% of cases of latent syphilis, known to be nonreactive to nontreponemal tests. The VDRL may be nonreactive in the patient who once had the disease and has been treated. False positive (FP) nontreponemal tests are usually but not always weakly reactive, and may occur in as high as 70% of some screened populations. FP reactions can occur in acute or chronic disease states, pregnancy, following vaccination, and in association with narcotic addiction. For weeks or years, FP responsiveness may precede

autoimmune diseases such as disseminated lupus erythematosus or rheumatoid arthritis. Few people have positive responses their entire life without any demonstrable disease entity. A reactive VDRL coupled with a positive history, physical findings, a positive history of treatment, or a combination of these supports a presumptive diagnosis of syphilis, yet the diagnosis should be strengthened by the otologist with treponemal tests. In the patient with a positive VDRL unsupported by clinical evidence of luetic disease, treponemal tests should be ordered.

The most common and efficient treponemal test used in this country today is the fluorescent treponemal antibody absorption test (FTA-ABS). Standardized glass slides coated with dried *T pallidum* (antigen) are incubated with a 1.5 dilution of the patient's serum (antibody) absorbed with a protein extract (sorbent) of a nonpathogenic Reiter strain of treponemes. The purpose of sorbent is to absorb any reactive antibodies to *T pallidum* that may coexist within the patient's serum in response to nonpathogenic saprophytic treponemes indigenous to the patient's oral cavity and gastrointestinal tract. In a positive test, the patient's globulin antibody binds with the spirochete on the glass slide, but in order to see this reaction an immunofluorescent marker must also be added to the slide. This consists of antihuman globulin fluorescently labeled. When positive, the antigen + antibody + fluorescent (*T pallidum* + serum/sorbent + fluorescein isothiocyanate-labeled antihuman globulin) results in spirochete fluorescence under ultraviolet microscopy. The absence of antibody results in no fluorescence or barely visible fluorescence. Reactivity is recorded according to the intensity of the fluorescence (a subjective interpretation) and recorded as reactive (2+ to 4+), borderline (1+ or less), and nonreactive (absent). Reactive FTA-ABS tests occur in 80-87% of patients with untreated primary syphilis, increasing to 90-99% in the second stage and 95-99% in the latent and late stages. Treponemal antibodies are not dynamic like reagin and persist throughout the patient's life, uninfluenced by treatment. A nonreactive FTA-ABS test, therefore, provides the best serological evidence of the absence of syphilis past or present, but FN responses can occur in incubatory stages of the disease (recent contact), in 20% of congenital syphilitics treated or untreated, and in 5% of patients with latent or late syphilis. False reactive FTA-ABS tests, though infrequent, may occur in patients with increased or abnormal globulin (disseminated lupus erythematosus and rheumatoid arthritis) in pregnancy, drug addiction, and in some normal individuals and in some situations when sorbent may not completely eliminate cross-reacting antibodies.

Isolation of the Organism

The serious clinical problem exists in late syphilis when the clinical clues favor a diagnosis of syphilis but serologic tests fail to demonstrate an antibody response (FN). This problem has been approached with renewed efforts by attempting to isolate *T pallidum*. This search in turn has been facilitated by modern immunofluorescent methods for the detection of treponemes. Identification of treponemes in serologically negative patients, particularly in whom vigorous antibiotic treatment has been administered, has raised serious questions regarding currently accepted therapeutic regimens for the treatment of syphilis. The first apparent documentation of persistence of pathogenic *T pallidum* in man after adequate penicillin therapy was published by Collard and associates.[7] They removed lymph nodes from five patients with tabes dorsalis and transferred them to normal rabbits, producing dark-field positive testicular lesions. This technique is now considered the most conclusive evidence for the existence of *T pallidum*.

Yobs and associates,[8,9] in the Venereal Research Laboratory in Atlanta, undertook a more extensive experiment in which lymph nodes from 45 patients with treated latent or late syphilis were transferred to rabbits. In two cases dark-field positive lesions developed in the recipient

rabbit. Both donors had been treated for latent syphilis many years earlier and both had been treated again three years before the study was performed, but re-infection of the patients after the last therapy could not be excluded. Silver and immunofluorescent stains of lymph nodes revealed treponemal forms in several other patients in which infectivity tests of rabbits had been negative.

Smith's group in Miami has demonstrated spiral organisms in the aqueous humor of the eye, cerebral spinal fluid, brain, and other tissues from several patients who had clinical evidence of neural, nervous system, or ocular syphilis. Many of these patients had negative serologic tests (VDRL, FTA-ABS, and TPI).[10-15] In most cases the organisms were identified by dark-field or immunofluorescent microscopy, but in a few infection was successfully transferred to animals. Smith's group also identified spiral organisms in 50% of the temporal arteries of ten patients with temporal arteritis.[14] Most impressive, perhaps, are three of the cases included in reports by Smith and Israel[15] that had clinical evidence of syphilis of the eye and negative or equivocal serologic tests for syphilis. Dark-field and fluorescent microscopy of specimens from the aqueous humor revealed treponemes and dark-field-positive lesions developed in animals inoculated with cerebrospinal fluid and extracts of these patients' tissues. In one of these cases the aqueous humor was infectious for a rabbit after a full course of ampicillin therapy.

Motile immunofluorescent spirochetes have been seen by Goldman and Girard[16] in the aqueous humor from two patients with treated congenital syphilis. Two other groups of investigators[17,18] have identified fluorescent treponemes in the aqueous humor and cerebrospinal fluid from patients with ocular syphilis, both treated and untreated. Several had negative serologic tests.

Examination of perilymph For *T pallidum* in cases suspected of syphilitic cochleovestibular dysfunction followed on the heels of the early ophthalmological work by Smith and associates, but treponemes were not identified until Wiet and Milko[19] found spiral organisms in the perilymph aspirate of a 43-year-old man with cochleovestibular dysfunction. The patient's VDRL was positive with serum but negative with spinal fluid, and he had received penicillin therapy at ages 15 and 20, and 7.2 million units of benzithene penicillin six months before the perilymph examination. The perilymph examination demonstrated spirochetes with morphologic and motility characteristics similar to those of *T pallidum* under dark-field microscopy as well as FTA-ABS staining of the organisms.

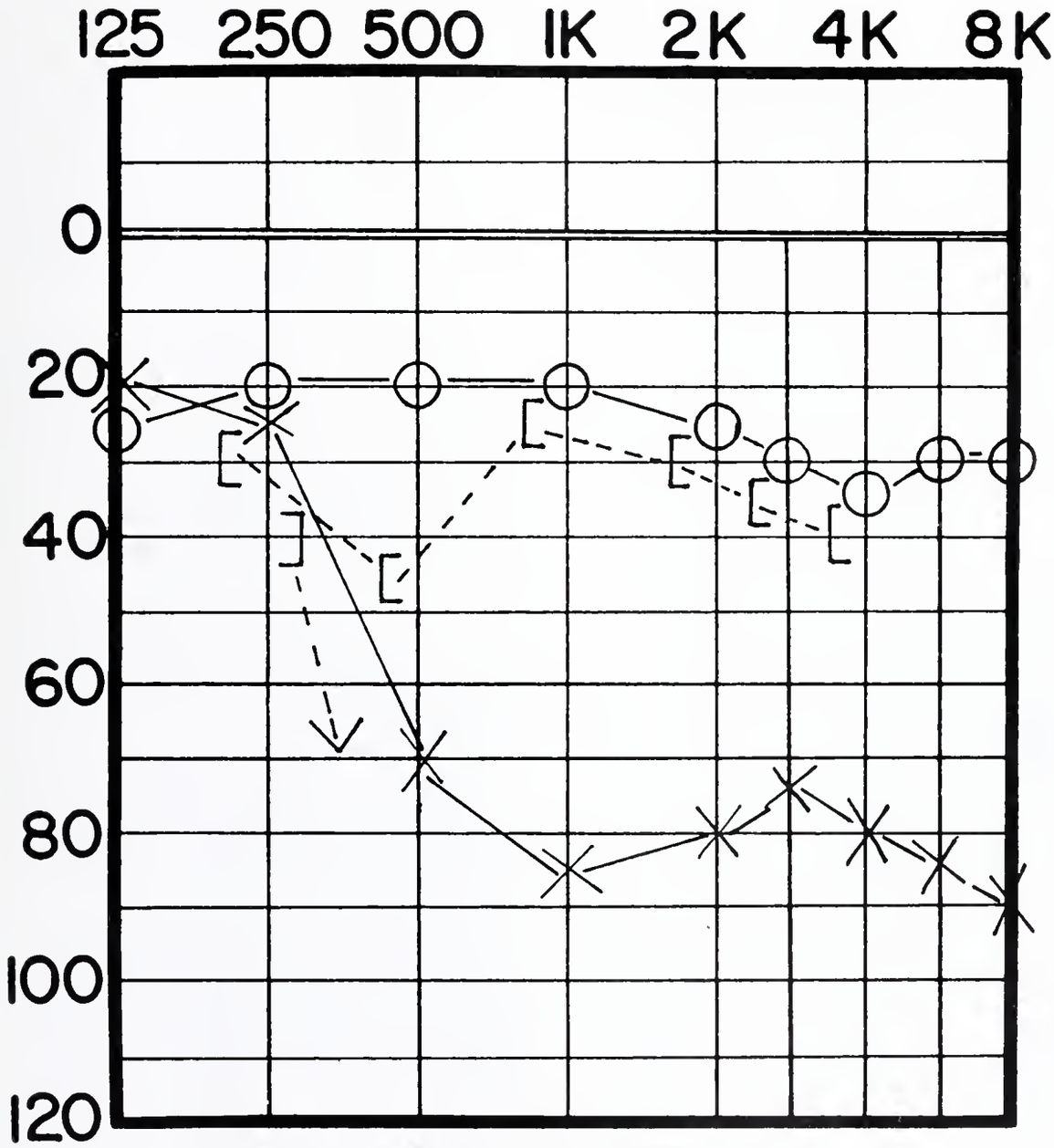
Case Report

A 51-year-old woman first seen March 29, 1972, had a one-year history of slowly progressive fluctuant hearing loss in the left ear. It was associated with a left tinnitus that fluctuated in intensity, but the patient denied any sensation of aural fullness and pressure or any type of balance or dizziness problems.

Results of her ear, nose and throat examination were within normal limits and except for the left ear there was no other neurological abnormality detected. She had exogenous obesity, mild essential hypertension, and diabetes well controlled with an oral hypoglycemic agent.

Results of the neurotologic evaluation were as follows: (1) roentgenograms of the skull and internal auditory canals were normal; (2) audiometry (Fig 1) on the right ear was within normal limits with a pure tone average of 22 dB and 96% discrimination score for speech. The left ear, however, showed a pure tone average of 78 dB with a high-frequency drop-off at 250 cps. When words were presented at 30 dB above the pure tone average, speech discrimination in the left ear was

1. Audiogram indicating normal hearing in the right ear (o-o-o) and a moderate high tone sensorineural hearing loss in the left ear (x-x-x).



	P/T AV. 500-2000	SRT	SL / PB MAX
RIGHT	22	13	+40 96%
LEFT	78	62	+30 64%

64%, plus 40, 34%, and speech and white noise 8%. She had excessive threshold tone decay from 500 through 4,000 cps. Her Békésy audiogram was type II. She showed partial recruitment and tympanometry indicated normal compliance with no reflex decay. The only positive results of vestibular function tests with electronystagmography were a spontaneous right beating nystagmus of 8° per second, eyes open, and a left reduced vestibular response of 30% using Jongkees formulas. The serology (VDRL) was negative and the FTA-ABS was reactive (3+).

On the basis of the serology and overview of the otoneurological examination, the presumptive diagnosis of luetic labyrinthitis was made despite a negative history from the patient and none of the stigmata of congenital syphilis. She was treated with 2.4 million units of penicillin weekly for three weeks and started on a 60 mg daily dose of prednisone. There was no change in her auditory function and steroids were, therefore, tapered off to discontinuance.

She was admitted to the hospital in June 1975 and under local anesthesia a tympanostomy was done and a trans-stapedial perilymph tap, using Silverstein's method, produced 5 μl of perilymph. Half was examined in the Mercy Hospital Medical Center laboratories and the remainder sent to CDC in Atlanta. (No further word could ever be obtained from Atlanta regarding the second half of the specimen, despite many letters and telephone calls). In the hospital laboratory, under dark-field microscopy, spirochetes were identified in large numbers with motility and morphology similar to *T pallidum*. FTA-ABS examination produced light staining of these organisms. The perilymph and spinal fluid FTA-ABS tests were negative.

A second course of penicillin was administered after hospital discharge, and the patient was followed clinically and remained fairly well. Her VDRL has remained nonreactive, the FTA-ABS stabilized at +2 and serologically the problem seemed to be controlled, but the pointed question, "Am I now cured?" could not be answered. This dilemma and the apparently little risk prompted a second perilymph tap in April of 1976. Though in lesser numbers, spirochetes were again identified under dark-field microscopy, with motility and morphology similar to *T pallidum*. The numbers were too few to obtain FTA-ABS studies because the frequent washing needed during processing dilutes some of the organisms.

This patient, then, clinically represents a case of late acquired luetic labyrinthitis. She has been treated with 14.4 million units of penicillin and spirochetes can still be identified in the perilymph. Unfortunately, questions remain: Are these *T pallidum* or saprophytes? If they are pathogens of syphilis, are they penicillin-resistant? Finally, is the timing of penicillin dosage in late syphilis not yet calibrated to spirochete replication, or is the dose insufficient to reach perilymph in bacteriocidal doses?

This study is incomplete and should have been extended to include the absolute identification of the organism and penicillin sensitivity studies.

The study as stated has been insufficient to establish unequivocal proof that the organisms seen were either pathogenic or *T pallidum*. Saprophytes of the oral cavity and gastrointestinal tract are so similar in their morphologic and motility characteristics that differentiation on these grounds is impossible. In addition, differentiation with immunofluorescent staining is inadequate since Goldman and Girard[16] have shown that their fluorescent anti *T pallidum* antibodies stained saprophytic gingival treponemes even after prior absorption with group treponemal antibody which was effective in preventing staining of other nonpathogenic treponemes. Smith's group has indicated that etch marks or water marks on glass slides used for spirochete FTA-ABS testing may fluoresce, giving false-positive immunofluorescent stains.

To date and to the best of our knowledge, there is no proof that any strain of *T pallidum* has been proved penicillin resistant. Until proof is established to the contrary, it is believed that an insufficient bacteriocidal dose of penicillin has reached the donor tissues (aqueous humor or perilymph). Nevertheless, future studies of this sort should include penicillin sensitivity testing, especially when proven *T pallidum* is isolated from the patient "adequately treated" with penicillin.

Questions this study has left unanswered include: (1) Were the organisms seen in this study *T pallidum*? (2) Do saprophytic spirochetes seen in other areas of the body (oral cavity and gastrointestinal tract) locate in the aqueous humor and in perilymph? and (3) If so, are they saprophytic or pathogenic in these sites?

Summary and Conclusions

Smith's statement is still pertinent: "Up to 1905 when Schaudinn and Hoffman discovered *T pallidum* syphilis was hard to diagnose and hard to treat. With the discovery of the Wassermann reaction in 1906 syphilis was easy to diagnose but still hard to treat. With the discovery and use of penicillin in 1953, syphilis was thought to be easy to diagnose and easy to treat. Now patients are being seen that were treated with penicillin in the past and have negative Wassermann reactions and late syphilis complications making syphilis again hard to diagnose and hard to treat."

To conclude, my recommendations to the otologist are as follows:

1. Serologic screening studies should include both a VDRL and an FTA-ABS test.
2. If a false-positive and spurious response is ruled and a diagnosis of syphilis is established, a qualitative VDRL should be obtained that may be used as a therapeutic monitor.
3. Negative serologic tests for syphilis do not rule out the latent or late stages of syphilis, and if clinical evidence suggests such a diagnosis these tests should be repeated and further support for the diagnosis should be obtained.
4. Examination of perilymph for *T pallidum* should be restricted to special circumstances because of the procedural risk to residual hearing. If spirochetes are indeed found, their absolute identification as *T pallidum* through positive animal transfer tests should follow and penicillin sensitivity tests should be carried out.

References

1. Becker GD: Late syphilis, its otologic symptoms and the fluorescent treponemal antibody absorption test. Arch Otol 102:729-731, 1976.
2. Manual of tests for syphilis. PHD publication No. 411, US Government Printing Office, Washington, DC 1969.
3. Caterall RD: Presidential Address to the M.S.S.V.D. Systemic disease and the biological false positive reaction. Br J Vener Dis 48:1-12, 1972.
4. Miller JN: Value and limitations of nontreponemal and treponemal tests in the laboratory diagnosis of syphilis. Clin Obstet Gynecol 18(1):191-203, 1975.
5. Sparling PF: Diagnosis and treatment of syphilis. New Eng J Med 284(1):642-653, 1971.
6. Harner RE, Smith JL, Israel CW: The FTA-ABS test in late syphilis. JAMA 203:545-548, 1968.
7. Collard P, Borel LJ, Durel P: Significance of spiral organisms found after treatment in late human and experimental syphilis. Brit J Vener Dis 40:81-89, 1964.
8. Yobs AR, Clark JW Jr, Mothershed SE, et al: Further observations on the persistence of *Treponema pallidum* after treatment in rabbits and humans. Brit J Vener Dis 42:116-130, 1968.
9. Yobs AR, Olansky S, Rockwell DH, et al: Do treponemes survive adequate treatment of late syphilis? Arch Derm 91:379-389, 1965.
10. Smith JL, Israel CW: The presence of spirochetes in late seronegative syphilis. JAMA 199:126-130, 1967.
11. Smith JL, Israel CW, McCrary JA, et al: Recovery of *Treponema pallidum* from aqueous humor removed at cataract surgery in man by passive transfer to rabbit testis. Amer J Ophthal 65:242-247, 1968.
12. Gager WE, Israel CW, Smith JL: Presence of spirochaetes in paresis despite penicillin therapy. Brit J Vener Dis 44:277-282, 1968.
13. Smith JL, Israel CW: Spirochetes in the aqueous humor in seronegative ocular syphilis. Persistence after penicillin therapy. Arch Ophthal 77:474-477, 1967.
14. Smith JL, Israel CW, Harner RE: Syphilitic temporal arteritis. Arch Ophthal 78:284-288, 1967.
15. Smith JL, Israel CW: Treponemes in aqueous humor in late seronegative syphilis. Trans Amer Acad Ophthal Otolaryng 72:63-75, 1968.
16. Goldman JN, Girard K: Intraocular treponemes. Arch Ophthal 78:47-50, 1967.
17. Christman EH, Hamilton RW, Heaton CL, et al: Intraocular treponemes. Arch Ophthal 80:303-307, 1968.
18. Rise NS, et al: Demonstration of treponeme like forms in cases of treated and untreated late syphilis. Brit J Vener Dis 46:1-9, 1970.
19. Wiet RJ, Milko DA: Isolation of the spirochetes in the perilymph despite prior antisyphilitic therapy: A case report. Arch Otolaryngol 101(2):104-106, 1975.

Dr Clemis, American Hearing Research Foundation, 55 East Washington Street, Chicago, IL 60602.

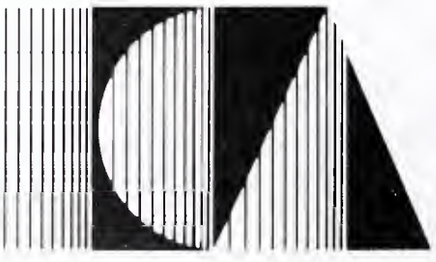
Our policy is protecting your practice.

Your practice is one of your most valuable assets. It comes from years of hard work and sacrifice. And part of your practice's value is the fine reputation you have made within your community and among your peers.

So, doesn't it make sense that this asset deserves the best malpractice protection possible? Can you really afford to settle for less?

Join with hundreds of your fellow Texas doctors in securing the peace of mind that comes from being protected by Texas' foremost professional liability carrier. We're the only company that offers you a non-assessable, "occurrence form" policy with rates based solely on Texas experience. No gimmicks. This tough, no-nonsense coverage is reinsured by two of the oldest and most prestigious insurance companies (three billion dollars in assets) in America. The plan is administered by a management team with proven reputations in the fields of law, medicine and insurance.

At ICA we never forget how important it is for you to protect your practice and professional standing. We know your concern is practicing medicine, and our concern is protecting your practice. Call ICA today, (713) 526-4863.



INSURANCE CORPORATION OF AMERICA
HOUSTON, TEXAS

A+AAAAA Reinsurance Protection provided by INA Reinsurance Corporation and the Great American Insurance Company.

CME

Enjoy a Montana holiday while you earn up to 10 hours of CME credit!

AMA Regional CME Meeting

Co-sponsored by the Montana Medical Association and the Montana Education and Research Foundation at the Glacier Park Lodge, Glacier National Park, August 27-28, 1977

Join your colleagues at the "Crown of the Continent." Come to Glacier National Park and further your medical knowledge amid nature's marvels. Classes end at 1:00 PM, leaving your afternoons free to explore Glacier's one million acres of snow-capped mountain crags...glistening waterfalls...pristine forests... clear mountain lakes. You can earn up to 10 hours of continuing medical education Category 1 credit. Here are the courses that will be offered:

Saturday (5 hours: $55)
- Office Gynecology & Diagnosis
- Acid Base, Fluid, & Electrolyte Balance

Saturday & Sunday (10 hours: $150 for physician & spouse; $110 for physician only)
- Human Sexuality & Marital Enrichment

Sunday (5 hours: $55)
- Clinical Electrocardiography
- Dermatology for Nondermatologists

For detailed information, return the coupon below:

AMA Dept. of Meeting Services
535 North Dearborn Street
Chicago, Illinois 60610

Please send me complete information on the AMA Regional CME Meeting at Glacier National Park, Montana, on the weekend of August 27-28, 1977.

Name _____
(please print or type)

Office Address _____

City/State/Zip Code _____

Office Phone No. ( ) _____ - _____

Physician supply in Texas: an analysis

Edward N. Brandt, Jr, MD, PhD

During the past 30 years, the advances in medical knowledge and care of patients have exceeded those of any other comparable period. Among these improvements must be counted vaccines for various infectious diseases, including poliomyelitis, smallpox, diphtheria, and others; development of life-saving therapeutic regimens for catastrophic illness such as acute myocardial infarction, strokes, and serious burns; ability to perform open heart surgery, more complex neurosurgery, and organ transplants; and availability of numerous new diagnostic procedures and drugs. The magnitude and rapidity of this progress has led to a reassessment of medical education.

Other issues have also arisen which are due, at least in part, to this progress, and which have resulted in further examination of medical education. These issues are the number of physicians available to provide care, and the specialty and geographic distribution of these physicians. A number of writings, speeches, and so on have focused attention on these issues and have led to descriptions like "health care crisis." Many solutions have been put forth, including new medical schools, mandatory service in underserved areas, and limitations on residency programs.

The purpose of this article is to define the availability of physicians in Texas and to propose some reasonable steps to solve some of the problems thus exposed. Most of this material developed from the work of the Texas Medical Association's Ad Hoc Committee on Graduate Medical Education. The committee included representatives from each of the medical schools and the Texas Medical Association: E. N. Brandt, Jr, MD, Chairman; J. D. Bonnet, MD; F. J. Bonte, MD; S. E. Crawford, MD; R. E. Goelzer, MD; J. J. Hinchey, MD; J. M. Merrill, MD; R. L. Tuttle, MD; and B. B. Westbrook, Jr, MD.

1. Nonfederal physicians in Texas, Dec 31, 1974.

Type of Practice	Number	Cumulative
Total	15,440	15,440
Unclassified	824	14,616
Inactive	824	13,792
Nonpatient Care	981	12,811
House Staff	2,125	10,686
Direct Patient Care	10,686	

Source: Physician Distribution and Medical Licensure in the United States, 1974, American Medical Association.

Licensed Physicians in Texas

The number of physicians licensed and living in Texas as of Dec 31, 1974, is summarized in Fig 1. Of the 15,440 such physicians, only 10,686 or 69.2% were out of training and engaged primarily in direct patient care. An additional 2,125 were in residency programs and thereby providing patient care. Thus, the appropriate figure for describing access to medical care should be 10,686, not 15,440. These data yield a population: physician ratio in Texas of approximately 1,150:1.

A second important characteristic is the distribution by specialty. The distribution of physicians into primary care specialties is summarized in Fig 2, with the following definition used for primary care:

"Primary care is a type of medical care delivery which emphasizes first contact care and assumes ongoing responsibility for the patient in both health maintenance and therapy of illness. It is personal care involving a unique interaction and communication between the patient and the physician. It is comprehensive in scope and includes the overall coordination of the care of the patient's health problems, be they biological, behavioral, or social. The appropriate use of consultants and community resources is an important part of effective primary care."

Whether obstetrics and gynecology should be included in this category is not a matter of complete agreement, but it has been included here to permit more meaningful comparisons with other studies.

The following principles have been elicited from review of a number of studies and writings to summarize the needs of physician distribution: (1) primary care physicians should constitute at least 50% of all physicians providing direct patient care; (2) 25% of physicians in practice should be educated in family medicine; (3) a minimum of three years of graduate medical education is required for a primary care physician. From these considerations, it is clear that Texas is undersupplied with primary care physicians and that the number in training implies that the situation will grow worse.

A third factor is the age distribution of practicing physicians. This distribution is included in Fig 3, and it indicates that 35.5% of family physicians and 30.1% of

	Direct Patient Care		House Staff		Other	Total	
	No.	%	No.	%	No.	No.	%
Family Medicine	2,714	25.4	88	4.1	29	2,831	20.5
Internal Medicine	1,122	10.5	469	22.1	169	1,760	12.8
Pediatrics	573	5.4	177	8.3	80	830	6.0
Obstetrics and Gynecology	778	7.3	145	6.8	40	963	7.0
Subtotal	5,187	48.5	879	41.4	318	6,384	46.3
Total	10,686		2,125		981	13,792	

Source: Physician Distribution and Medical Licensure in the United States, 1974, American Medical Association.

2. Nonfederal primary care physicians in Texas, Dec 31, 1974.

3. Nonfederal physicians in Texas, age distribution (percent), Dec 31, 1973.

	44 & Under	45-54	55-64	65 & Over	Median Age
All Physicians	40.0	31.4	19.0	9.6	48.0
Family Medicine	28.8	35.7	21.5	14.0	50.7
Internal Medicine	41.4	28.4	19.8	10.3	48.3
Pediatrics	45.1	32.1	15.3	7.4	46.4
Obstetrics and Gynecology	44.9	28.3	18.4	8.4	46.5

Source: AMA Physician Masterfile, 1973. Special tabulations, Center for Health Services Research and Development, American Medical Association.

4. Nonfederal physicians in Texas, 1968 to 1974.

	Total			Direct Patient Care			Graduate Education			Other		
	1968	1974	Change	1968	1974	Change	1968	1974	Change	1968	1974	Change
All Physicians	11,463	13,792	+20.3%	9,139	10,686	+21.5%	1,406	2,125	+ 51.1%	918	981	+ 6.9%
Primary Care	5,557	6,384	+14.9	4,889	5,187	+ 6.1	403	879	+118.1	265	318	+20.0
Family Medicine	2,962	2,831	(- 4.4)	2,887	2,714	(- 6.0)	45	88	+ 95.6	30	29	(- 3.3)
Internal Medicine	1,172	1,760	+50.2	876	1,122	+28.1	165	469	+184.2	131	169	+29.0
Pediatrics	658	830	+26.1	487	573	+17.7	105	177	+ 68.6	66	80	+21.2
Obstetrics and Gynecology	765	963	+25.9	639	778	+21.8	88	145	+ 64.8	38	40	+ 5.3

Source: AMA Physician Masterfile, 1973. Special tabulations, Center for Health Services Research and Development, American Medical Association.

5. Distribution of primary and nonprimary care nonfederal physicians in direct patient care by county population size.

County Population Size	% State Pop.	All Specialties No.	All Specialties %	In Primary Care GP	In Primary Care % GP	In Primary Care IM	In Primary Care % IM	In Primary Care PD	In Primary Care % PD	In Primary Care OBG	In Primary Care % OBG	In Primary Care Total	In Primary Care % Total	Nonprimary Care No.	Nonprimary Care %
Under 5,000	1.2	50	0.5	46	1.7	0	0.0	1	0.2	0	0.0	47	0.9	3	0.1
5,000 - 9,900	3.3	170	1.6	137	5.0	9	0.8	1	0.2	2	0.3	149	2.9	21	0.4
10,000 - 19,900	7.9	450	4.3	333	12.2	12	1.1	4	0.7	7	0.9	356	6.9	94	1.8
20,000 - 49,900	12.6	808	7.7	433	15.9	58	5.4	29	5.1	38	4.9	558	10.9	250	4.7
50,000 - 99,900	11.4	1,028	9.8	283	10.4	102	9.4	68	12.0	80	10.4	533	10.4	495	9.3
100,000 - 199,900	10.8	1,267	12.1	247	9.1	148	13.7	72	12.7	96	12.5	563	10.9	704	13.2
200,000 - 499,900	12.1	1,371	13.1	303	11.1	129	11.9	83	14.6	98	12.8	613	11.9	758	14.2
500,000 - 999,900	13.6	1,511	14.4	347	12.7	149	13.8	81	14.3	116	15.1	693	13.5	818	15.4
Over 1,000,000	27.0	3,812	36.4	597	21.9	474	43.8	228	40.2	331	43.1	1,630	31.7	2,182	41.0
All Counties	100.0	10,467	100.0	1,726	100.0	1,081	100.0	567	100.0	768	100.0	5,142	100.0	5,325	100.0

Source: AMA Physician Masterfile, 1973. Special tabulations, Center for Health Services Research and Development, American Medical Association.
US Bureau of the Census, *Current Population Reports*, "Estimates of the Population of Texas Counties and Metropolitan Areas: July 1, 1972 and 1973," Series P-25, No. 535.

nonsubspecialty internists were over age 55 as of Dec 31, 1973. Thus, they will be age 65 or over as of Dec 31, 1983, another indication of a future diminution of availability.

Progress has been made, however, as outlined in Fig 4. From 1968 to 1974, the number of physicians in direct patient care increased by 1,547 or 21.5%. Unfortunately, the supply of primary care physicians increased by only 6.1% due to a decrease of 173 family physicians. As will be discussed later, 1968 is an important date to use as a baseline.

The geographic distribution of physicians in Texas has been the source of much controversy. Fig 5 summarizes the distribution by county size. Of special interest is the observation that the 236 counties with a population of 99,900 or less contain 36.4% of the Texas population, whereas only 23.9% of Texas' physicians practice there. As a consequence, the patient:physician ratio is much higher in these counties. Furthermore, it is especially large for those counties with a population less than 10,000. This table is not adequate to determine regional shortages in large counties.

From these data, the following conclusions are possible:

1. There is an absolute shortage of physicians whose primary activity is direct patient care.

2. There is a shortage of primary care physicians in all four categories.

3. The shortage of primary care physicians will become worse, especially for family physicians and internists, since the number in residency programs is not adequate to meet the deficit and replace those physicians who will leave practice due to age and other factors.

4. The small counties have the greatest shortage of all physicians.

What Is Being Done

To meet the undersupply of physicians, more MDs must be graduated and more physicians must be attracted from other states to replace those Texas graduates who leave the state. In 1968, the three Texas medical schools (UTMB, Southwestern, and Baylor) graduated 320 MDs. In that same year, the Coordinating Board, Texas College and University System, released a plan for medical and dental education in Texas. Since then, four new medical schools have become operational (Texas A&M will admit students in 1977). Fig 6 indicates the anticipated number of graduates through 1982. This is nearly a fourfold increase from 1968 to 1982, a remarkable achievement. Assuming the current emigration and immigration rates of physicians stay essentially the same, the projected number of graduates should be adequate to meet the needs of Texas. Indeed, if these projections prove accurate, 7,163 new MDs will be graduated in the period 1974-1982. This is 46% of the total licensed physicians and greatly exceeds the anticipated losses during this same period.

The next question is the specialty choice of these graduates. For recent graduates, the only measure available is the choice of a first-year graduate position. Fig 7 indicates those choices for the 1974, 1975, and 1976 classes. Assuming that these data do reflect career choice, it seems clear that students are selecting the areas of greatest need. This is contrary to the commonly voiced statement that medical schools discourage or prevent students from entering the primary care disciplines.

If we are to maintain our very high retention rate of graduates (currently about 68%), graduate training positions must be available in Texas. Fig 8 lists the first-year graduate medical education positions available in Texas. Several observations are possible from these data. First, the number of primary care positions is too small to meet the state's needs. Second, the medical schools are meeting their responsibilities, since 85% of the first-year positions in primary care and 82% of the total first-year positions are sponsored by medical schools. Note that in 1976, the total number of first-year posi-

6. Graduates of Texas medical schools.

Year	UT Galveston	UT Dallas	UT San Antonio	UT Houston	Total UT System	Baylor	Texas Tech	Texas A&M	Total
1974	190	112	96	31	429	181	24	0	634
1975	172	132	110	42	456	136	41	0	633
1976	186	139	123	49	497	178	42	0	717
1977[a]	203	150	125	48	576	168	40	0	734
1978[a]	203	200	125	64	592	168	40	0	800
1979[a]	203	200	125	100	628	168	40	0	836
1980[a]	203	200	135	0[b]	538	168	40	32	778
1981[a]	203	200	135	150[c]	688	168	40	32	928
1982[a]	203	200	200[c]	200[c]	803	168	100[c]	32	1,103

a: Projected and assumes no attrition.
b: Due to change from three-year to four-year curriculum.
c: Dependent upon receipt of necessary funds, facilities, and approval.

7. Selection of first-year graduate training by graduates of Texas schools.

Institution	Family Medicine 1974	1975	1976	Internal Medicine 1974	1975	1976	Pediatrics 1974	1975	1976	Obstetrics and Gynecology 1974	1975	1976	Total Primary Care 1974	1975	1976	Flexible 1974	1975	1976	Others 1974	1975	1976	Unknown 1974	1975	1976	Total Graduates 1974	1975	1976
UT Medical Branch	10	21	25	48	49	48	10	20	17	17	12	17	85	102	107	29	21	17	72	48	60	4	1	2	190	172	186
UT Southwestern	4	8	15	38	55	56	5	7	6	4	12	9	51	82	86	11	6	12	50	44	41	0	0	0	112	132	139
UT San Antonio	3	14	14	25	19	19	8	15	13	9	7	12	45	55	58	15	5	9	36	50	53	0	0	3	96	110	123
UT Houston	3	10	9	8	6	7	7	6	7	1	1	2	19	23	25	9	11	10	3	8	14	0	0	0	31	42	49
Subtotal UT System	20	53	63	119	129	130	30	48	43	31	32	40	200	262	276	64	43	48	161	150	168	4	1	5	429	456	497
Baylor	15	9	19	63	29	53	15	8	20	11	19	13	104	65	105	39	19	22	37	48	50	1	4	1	181	136	178
Texas Tech	3	6	9	1	9	6	0	6	6	0	3	4	4	24	25	14	5	10	6	12	7	0	0	0	24	41	42
TOTAL	38	68	91	183	167	189	45	62	69	42	54	57	308	351	406	117	67	80	204	210	225	5	5	6	634	633	717
Percentage of Graduates	6.0	10.7	12.7	28.9	26.4	26.4	7.1	9.8	9.7	6.6	8.5	7.9	48.6	55.4	56.6	18.4	10.6	11.2	32.8	33.2	31.4	0.7	0.8	0.7			

8. First-year graduate medical education positions offered in Texas.

Institution	Family Medicine 1974	1975	1976	Internal Medicine 1974	1975	1976	Pediatrics 1974	1975	1976	Obstetrics and Gynecology 1974	1975	1976	Total Primary Care 1974	1975	1976	Flexible 1974	1975	1976	Others 1974	1975	1976	Total Positions 1974	1975	1976
UT System	26	36	39	95	99	96	36	39	46	21	25	24	178	199	205	15	20	14	126	145	167	319	364	386
Baylor	4	6	6	53	53	53	20	20	20	6	9	9	83	88	88	18	18	18	37	59	86	138	165	192
Texas Tech	4	4	20	0	0	0	0	0	3	0	0	1	4	4	24	0	0	6	0	0	0	4	4	30
Subtotal, University Sponsored Positions	34	46	65	148	152	149	56	59	69	27	34	34	265	291	317	33	38	38	163	204	253	461	533	608
Others	17	20	16	30	29	29	13	18	6	13	10	7	73	77	58	53	34	31	52	57	44	178	168	133
Total Positions	51	66	81	178	181	178	69	77	75	40	44	41	338	368	275	86	72	69	215	261	297	639	701	741
Percentage of Total	8.0	9.4	10.9	27.8	25.8	24.0	10.8	11.0	10.1	6 2	6.3	5.5	52.8	52.5	50.6	13.4	10.3	9.3	33.6	37.2	40.1			

Source: Texas Medical Association.

tions was 741 and there were 717 graduates. The relationship between graduates and first-year positions is depicted in Fig 9. Note that in 1976, the number of students selecting primary care positions exceeded the number of such positions available. This situation will get worse with each succeeding year, and by 1982, approximately 400 new first-year positions (more than 300 in primary care) will be required simply to stay even with the number of graduates.

Figs 6-9 indicate that the projected supply of graduates is adequate and that they are entering the disciplines of greatest need. The shortage of graduate education positions is serious, however, and this shortage is growing larger.

The need for graduate medical education for all physicians has been questioned. Prior to 1950, large numbers of physicians entered practice following graduation and one year of internship. That was a reasonable course at that time, since five years of medical education could result in acquisition of the bulk of

9. Graduates of Texas medical schools and first-year graduate positions in Texas.

Year		Graduates	Positions Offered	Positions/Graduate
1974	Total	634	639	1.01
	Primary Care[a]	308	338	1.10
1975	Total	633	701	1.10
	Primary Care[a]	351	368	1.05
1976	Total	717	741	1.03
	Primary Care[a]	406	375	0.92
1977	Total	734[b]		
	Primary Care[a]	440[c]		
1978	Total	800[b]		
	Primary Care[a]	480[c]		
1979	Total	836[b]		
	Primary Care[a]	502[c]		
1980	Total	778[b]		
	Primary Care[a]	467[c]		
1981	Total	928[b]		
	Primary Care[a]	557[c]		
1982	Total	1,103[b]		
	Primary Care[a]	662[c]		

a: Number taking first year in primary (family medicine, internal medicine, obstetrics and gynecology, and pediatrics).
b: Projected. Dependent upon receipt of necessary funds, facilities, and approval as outlined in footnote "b" of Fig 6.
c: Projected. Based upon current trends.

medical knowledge and skills. Additional education was required only for those physicians entering highly specialized fields. The rapid growth of medical knowledge, however, has made it necessary to lengthen the period of education from five to seven years. Indeed, the specialty organizations for family medicine, internal medicine, and pediatrics have, after extensive study, recommended that three years of graduate medical education are necessary.

From these considerations, the Ad Hoc Committee on Graduate Medical Education of the TMA adopted the following five principles which were subsequently approved by the TMA Council on Medical Education and Hospitals and the House of Delegates:

1. The number of postgraduate positions should approximate the number of graduates of Texas medical schools.
2. At least 50% of these should be in primary care areas (family practice, obstetrics and gynecology, internal medicine, and pediatrics).
3. State funding should be sought at the next appropriate session of the Legislature for the urgent expansion and educational aspects of the new primary care residencies.
4. All new positions should be created in affiliation with medical schools. The Council strongly supports expanding residencies and developing satellite training positions in outlying and rural areas, where practical.
5. The Council stresses the need for urgent action in initiating development of the new positions on a timetable compatible with the increased demand for residency training in primary care.

It is clear that the two highest priorities for medical education in Texas are to fund existing medical schools adequately to permit expansion to meet the projected number of graduates and to fund residency positions in primary care. Without these actions, it will not be possible to meet present or future needs for physicians in Texas.

The goal for Texas should be 300 first-year positions in family medicine and 400 first-year positions in the other three primary care disciplines by 1982. By 1985, 900 total positions (300 per year for each of three years) will be required in family medicine and 1,200 positions in the other three primary care disciplines. This will necessitate the creation of approximately 220 new first-year positions (660 total) in family medicine and 110 new first-year positions (330 total) in the areas of internal medicine, pediatrics, and obstetrics and gynecology.

In response to this charge, the six medical schools developed plans to increase the number of first-year positions in primary care from 330 to 560 during the next three years. This can be accomplished, however, only with adequate funding by the Legislature. The choice seems clear.

Dr Brandt, Associate Deputy Chancellor for Health Affairs, The University of Texas System, 601 Colorado, Austin, TX 78701.

Information for authors

Texas Medicine is a scientific, clinical journal published primarily for members of the Texas Medical Association. In addition, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, coming meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Scientific Articles
Manuscripts should be typed double-spaced with ample margins on firm paper. Two copies should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

References
Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrative Material
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously Published Material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with the manuscript.

Editorials
Editorials should be prepared in the same general manner, and should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the Managing Editor and consultants.

News
News items should be sent to the Editorial Offices, 1801 North Lamar Blvd., Austin 78701.

Continuing Education, Meetings
Continuing education courses and medical meetings are listed in each issue. Information about courses should include title, sponsor, location, dates, duration, fee, how many may enroll, for whom the course is designed, teaching methods, type and number of hours credit, and name and mailing address of a person to contact.

Information about meetings should include the name of the organization, place and inclusive dates, and name and mailing address of a person to contact. Program topics and names of speakers may be included as space permits.

Material should be submitted in writing six weeks before publication; for example, information for the June issue (published June 1) is needed by April 15.

Obituaries
Obituaries of deceased TMA members are published if adequate information is received within four months of date of death. When notifying the editors of a member's death, please give the name and address of next of kin.

Policy on Columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Scientific Publication Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the Committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the Managing Editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

TMA annual Session brings 6,153 to Houston

TMA Annual Session May 11-15 attracted 6,153 persons to Houston. More than 3,507 physicians, 1,457 guests, 719 exhibitors and 470 auxiliary members attended the annual meeting.

Activities included continuing medical education session, House of Delegates meetings, special luncheons, and many other activities.

Distinguished Service Award

Wendell H. Hamrick, MD, Dickinson, was nominated for the Distinguished Service Award. He will receive the award at the TMA Fall meeting.

Dr Hamrick is past president of the Texas Industrial Medical Association and of the Harris County Medical Society and chairman of the TMA Council on Constitution and Bylaws. He has been chairman of the Texas Medical Center Library, a trustee of the House Academy of Medicine and speaker of the TMA House of Delegates.

He received his medical degree from the University of Texas Medical Branch in Galveston in 1934.

Texas Medical Professional Liability Study Commission

For their contributions to the profession through services on the Texas Medical Professional Liability Study Commission, special commendations and plaques were presented to E. Don Webb, MD, Houston, and Milton V. Davis, MD, Dallas.

The TMA House of Delegates also voted unanimously to commend W. Page Keeton for his outstanding contributions as chairman of the Commission, and to invite him as a special guest of the House at its November meeting so that TMA may honor him in an appropriate manner.

Rep Paul G. Rogers

During his address to the Saturday luncheon meeting, Florida Congressman Paul G. Rogers told Texas doctors to "assert greater leadership" in helping solve national problems of air pollution, rising medical costs, and inadequate health education.

Rep Rogers said that he has been disappointed that more physicians have not bombarded members of Congress about the need to strengthen the Clean Air Act. Rep Rogers is chairman of the House Public Health and Environment Subcommittee.

"If all of you don't work hard to clean up the air, then we will all see increased heart and lung disease, more asthma attacks and the like," he said.

Rep Rogers also called on doctors to become more involved in local levels in correcting fraud and abuse of the government's Medicaid and Medicare programs and doing everything they can to control skyrocketing health care costs.

"We're spending $55 billion annually on hospital costs. Unnecessary and unused hospital beds accounted for about $2 billion waste last year," he said.

Even with all of the problems confronting medicine today, "We have the best quality of medical care in the world . . . and I salute you and ask you to help us in the Congress keep it that way," Rep Rogers said.

AMA president

"These are adverse days for American medicine," Richard E. Palmer, MD, AMA president, said.

The AMA president was the keynote speaker at the annual Blue Cross-Blue Shield of Texas luncheon for the members of the House of Delegates.

1.

2.

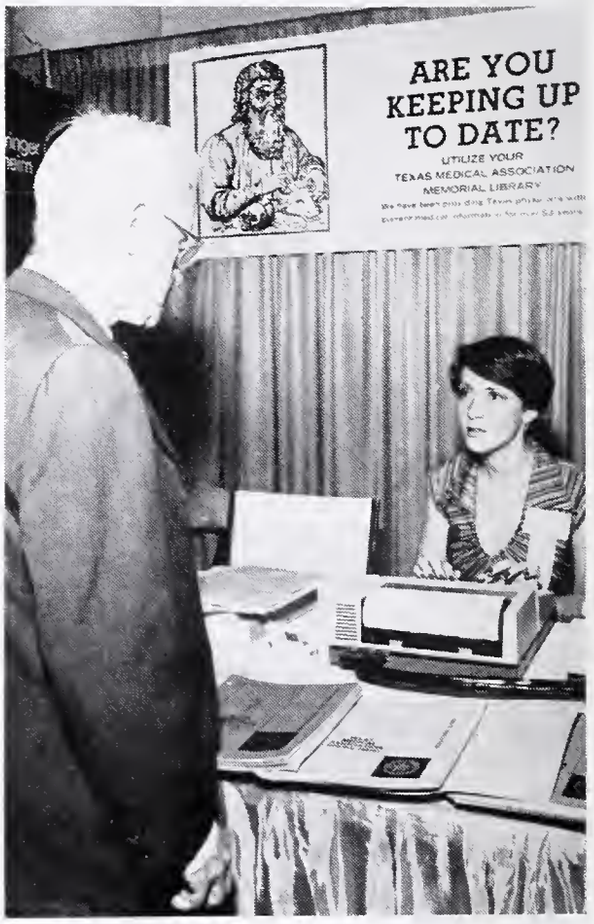
3.

4.

1. L.S. Thompson, MD, right, Dallas, TMA past president, presents a plaque of appreciation to E. Don Webb, MD, Houston, for his service on the Texas Medical Professional Liability Study Commission. 2. L.S. Thompson, MD, right, Dallas, TMA past president, presents a plaque of appreciation to Milton V. Davis, MD, Dallas, for his service on the Texas Medical Professional Liability Study Commission. 3. Florida Congressman Paul G. Rogers addresses the TMA Saturday luncheon meeting during the TMA Annual Session. 4. Rep Rogers, right, visits with Travis Smith, MD, left, Abilene, speaker of the TMA House of Delegates, and Mylie Durham, MD, Houston, TMA president-elect.

1. James H. Sammons, MD, American Medical Association executive vice president addresses the Friday TMA luncheon. 2. Nancy Tissing, a librarian in the TMA Memorial Library in Austin, discusses the library's services with a physician in the exhibits hall during Annual Session. 3. Richard E. Palmer, MD, AMA president, addresses the open hearing of the TMA delegation to the AMA. Sitting on the panel are two members of the TMA delegation to the AMA, C. Max Cole, MD, Dallas, center, and Mylie E. Durham, MD, Houston.

1.



2.

3.

In reviewing recent events affecting organized medicine, Dr Palmer emphasized the growing strength of the AMA.

He said in the past fiscal year the AMA boasted 204,000 members in all membership classifications. This figure included 153,000 full dues-paying members and approximately 30,000 residents and medical students.

He indicated that continued strength was essential for the AMA to effectively represent the nation's doctors before governmental bodies.

Dr Palmer cited the AMA's successful 1974 legal suit challenging the government utilization review regulations as establishing the AMA as the voice of doctors in this country.

"Regulation is the opposite of freedom," Dr Palmer declared.

He said the AMA is currently backing legislation which would provide a basic comprehensive catastrophic health insurance program for all America. He added that the bill, based on existing methods of health care financing, would insure a pluralistic system of medicine for American patients.

Opponents of the bill are seeking to pass national health insurance system similar to the one established in Great Britain.

Dr Palmer also expressed organized medicine's opposition to a bill currently under consideration in the Senate which would give the federal government access to patient records.

He said the AMA contends there are ample provisions in existing laws to deal with fraud and abuse within the medical community. He added that only a small number of doctors were involved in this issue.

AMA executive vice president

"Both patients and doctors believe the number one problem in American medicine is cost," James H. Sammons, MD, executive vice president of the AMA, told a crowd of several hundred at the Friday general meeting luncheon.

These are the results of two national surveys commissioned by the AMA. Dr Sammons added that there was less than a 5% difference in the results of the polls separately directed at lay persons and physicians.

Dr Sammons said the AMA has been concerned with the cost of medical care for some time. A special commission which has studied the problem for 18 months is expected to publish its findings this fall.

The commission has studied areas such as supply and demand, production and technology.

The medical executive commented on various government efforts to regulate health care costs.

"The most dangerous piece of legislation enacted is the National Health Planning and Resources Development Act of 1974," he stated, adding the law is not going to reduce medical care costs and may increase them.

He also charged that the 9% ceiling on hospital costs proposed by the Carter administration will lead to a rationing of services.

"The patient gets hurt when you curtail services," he said.

Dr Sammons accused the administration of selecting isolated segments of the economy in efforts to curb rising costs while other parts of the economy continue to exert pressure on these segments.

He urged the administration to dedicate its concern to the problem of inflation in general.

"The wholesale closing of beds by an arbitrary formula is not going to solve cost problems," Dr Sammons said.

He said the AMA is willing to discuss such issues and to negotiate with the gov-

ernment if the negotiations are in good faith.

"This failing," he added, "we will negotiate in front of a judge in a federal courthouse."

TEXPAC awards

During the meeting TEXPAC was presented an unprecedented six AMPAC membership awards for 1976.

AMPAC board member Jack Lewis, MD, Dayton, Ohio, presented the awards to Charles H. Wilson, MD, Wichita Falls. TEXPAC received a first place award for the total contribution, first place for largest increase over the prior year, first place in all events, second place in sustaining membership, second place in total women membership, and third place in contribution per member.

Anson Jones awards

Members of the Texas news media were honored guests at the Friday general luncheon.

The media representatives were winners of the annual TMA Anson Jones Awards for excellence in communicating health information to the public.

The contest included magazine, newspaper, television and radio categories.

Winners in the competition include Charlotte Guest, *Fort Worth Star Telegram;* Mary Dudley, *The Austin American Statesman;* Sarah Greene, *The Gilmer Mirror;* Le Killgore, *San Angelo Standard Times;* and William Broyles, *Texas Monthly.*

Other winners include Harvie Jordan, KVET Radio, Austin; Napoleon Johnson, KORC-TV, Houston, and Cecile Burandt, KFMD-TV, Beaumont.

Each winner received $250 and a plaque.

Physicians and spouses art exhibit

Needlepoint and photography entries tied for Best of Show in the Tenth Annual Physicians' and Spouses' Art Exhibition.

Mrs Richard L. Plumb, Houston, with "Imari Plate" and John White, MD, Pasadena, with "Morning has broken" took the top honors.

Placing first in the oil painting category was Mrs Karin Krohn, Waco, with "#216 untitled." Mrs Carol Darling, Austin, placed first in drawings with "Cougar."

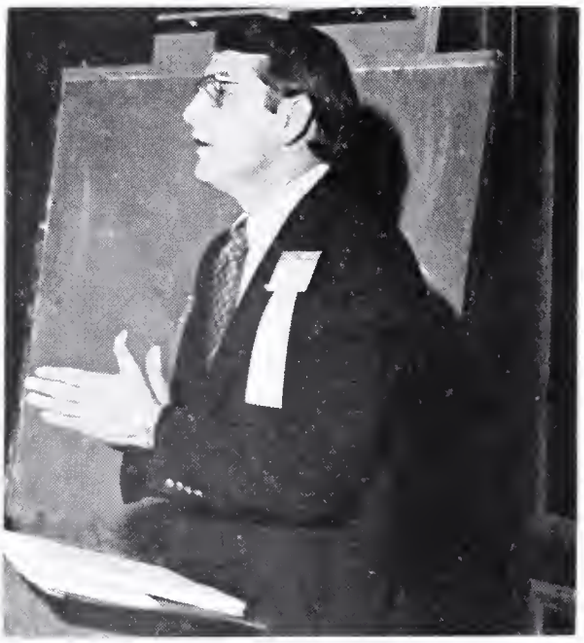
In the water color division, Mrs Rita Seghers, Temple, placed first with "Where it's peaceful."

Among the craft entries, "Imari Plate," a needlepoint by Mrs Richard L. Plumb, Houston was first, and in the photography division "Morning has broken," a picture by John White, MD, Pasadena was first.

First place in sculpture awards went to David Sacks, MD, San Antonio, for "Hildegarde."

1.

1. AMPAC board member Jack Lewis, MD, Dayton, Ohio, left, presents three membership plaques to TEXPAC chairman Charles H. Wilson, MD, Wichita Falls. 2. Ace Pickens, JD, a member of the firm of Brown, Maroney, Rose, Baker, and Barber, TMA Legal Counsel, addresses the meeting of the TMA Medical Student Business Section. 3. A physician looks at an exhibit by the Texas Air Control Board in the exhibits hall at Annual Session.



2.

3.

Continuing medical education in Texas

Continuing medical education, long taken for granted by physicians, has become a popular byword in recent years.

Physicians are inundated with offers for new and exotic continuing education programs in their daily mail. Sorting out the valid and worthwhile programs to keep themselves up to date and finding the time to participate in the programs undoubtedly is one of the greatest challenges facing physicians in today's hectic world.

The Texas Medical Association was originally built upon continuing education goals and has for many years sponsored one of the nation's largest and most comprehensive annual sessions. Similarly, it has published a clinical medical journal, TEXAS MEDICINE, since 1905, and provided a clinical library since approximately 1923. TMA also created a statewide continuing education directory to help physicians plan their continuing education calendars a year ahead.

Most recently, the Association has developed with great care an accreditation program to assist other organizations in the state, particularly community hospitals, to establish accredited continuing education programs for physicians close to home. The Association itself has qualified as an accredited institution under the American Medical Association's accreditation auspices. Physicians attending the TMA annual session have had the opportunity since 1974 to earn a significant number of Category 1 hours under the AMA Physician's Recognition Award. (In May 1977, TMA offered 242 Category 1 hours at its annual session in Houston.)

Where does the future lie in continuing education? What may physicians expect from their professional organizations in terms of meeting continuing education criteria? What is the role of self-assessment programs? How can physicians determine what continuing education programs will really be valuable to them in their practices?

These and other questions cannot all be answered at this time, but in this article, TEXAS MEDICINE hopes to outline briefly the status of continuing medical education in Texas and nationally to bring our readers up to date on the trends and status of continuing medical education.

Compulsory CME, Recertification

Information from the American Medical Association and state medical associations shows a trend toward compulsory continuing medical education. Nineteen states have laws requiring CME for re-registration of the license to practice medicine and 17 state medical societies have CME requirements for membership.

Most of the states with relicensure requirements accept the AMA Physician's Recognition Award or its equivalent (150 hours every three years) as evidence that a physician has fulfilled the CME requirement. Five states (California, Illinois, Rhode Island, Utah, and Wisconsin) accept fewer than the PRA's prescribed 150 hours for relicensure. Wisconsin's malpractice legislation requires 15 hours of CME per year, the lowest of any of the states with a relicensure requirement.

Fifteen of the 17 states with CME membership requirements accept the PRA or its equivalent. California and Oregon have voluntary CME programs for their members.

Further, in March 1973, the American Board of Medical Specialties (ABMS) took the following action on recertification:

> It was moved, seconded and carried that ABMS adopt, in principle, and urge concurrence of its member boards with the policy that voluntary, periodic recertification of medical specialists become an integral part of all national

Doctors attending TMA Annual Session in Houston participate in a Curbstone Consultation on High-Risk Obstetric Care for continuing medical education.

medical specialty certification programs and, further, that ABMS establish a reasonable deadline when voluntary, periodic recertification of medical specialists will have become a standard policy of all member boards.

The April CME Fact Sheet from the AMA states, "All 22 medical specialty boards have established a policy to provide recertification, 14 of these have established dates on which recertification will begin."

Regardless of the trend, Texas Medical Association has adopted a "wait and see" attitude. Problems reported by states with CME requirements for relicensure and/or state medical society membership indicate that this cautious approach is a wise one.

The Feb. 21, 1977, issue of *Medical Economics* recounted some of the problems states with relicensure and membership requirements face. Among these are establishing valid criteria, proving that the program does some good, getting doctors to comply, and enforcing the program.

According to the article, critics of the Physician's Recognition Award (PRA) as a standard for membership or relicensure point out the award's "loose structure . . . which permits more than half of the 150 hours they need every three years to be totted up in 'nonsupervised individual CME activities' and 'other meritorious learning experiences.' "

Sixty Category 1 hours are required for the award. The AMA defines a Category 1 program as "one having sufficient scope and depth of coverage of a subject area or theme to form an educational unit that is planned, coordinated, administered and evaluated in terms of educational objectives that give a defined level of knowledge or a specific performance skill to be attained by the physician participating in the program." The physician is responsible for keeping his own CME records, and the AMA Council on Medical Education accepts the physician's statement that he has fulfilled the CME requirements for the award.

There also are problems in assessing the long-term value of courses, determining how the courses affect practice, and evaluating the programs, the article says.

Obviously there are several reasons why physicians cannot comply with the membership and relicensure requirements. Caring single-handedly for a whole rural community or caught in the urban crush, a physician may find it difficult to schedule CME activities. Physicians who complete the required hours often find it difficult to find time to report their hours, the article states. Inaccessibility of courses is considered the second chief reason for noncompliance.

CME as a TMA Priority

With these and other considerations in mind, Texas Medical Association's Executive Board cited continuing medical education as a 1977 priority and has asked the Association Councils on Medical Education and Hospitals and on Annual Session to continue intensifying efforts in areas related to continuing medical education. Presently, the Association offers the following CME services:

(1) As an organization accredited for continuing education by AMA, TMA offers Category 1 credit for the majority of the programs at the annual session. The 1977 annual session in Houston gave individual physicians the opportunity to earn up to 32 Category 1 hours.

(2) Publishes a monthly clinical journal.

(3) Maintains a clinical library for physicians.

(4) Publishes an annual continuing education directory for physicians and serves as a resource center on continuing education programs and services available throughout the state. The 1977 Texas Continuing Education Directory for Physicians provides a personal record-keeping form to assist physicians in preparing their PRA applications for processing by the AMA.

(5) Conducts a program to accredit local and in-state continuing education programs in institutions and organizations. (An accreditation subcommittee to oversee the program held its first meeting May 11, 1977. Two institutions have been accredited and four applications currently are being reviewed. As of July 1, 1977, state accreditation programs will be under the purview of the Liaison Committee on Continuing Medical Education (LCCME), which has pledged its support of the state accrediting bodies. The LCCME, an arm of the AMA Coordinating Council on Medical Education, comprises representatives of the American Board of Medical Specialties, American Hospital Association, AMA, Association for Hospital Medical Education, Association of American Medical Colleges, Council of Medical Specialty Societies, and the Federation of State Medical Boards of the US, Inc).

(6) Maintains liaison with organizations and institutions providing continuing medical education in the state.

(7) Encourages standards of excellence in continuing medical education programs and encourages development of programs which are easily accessible to rural and urban physicians throughout the state.

In the future, the Association likely will record by computer the continuing education activities reported by individual members. A small number of member physicians now voluntarily report their CME activities, and this information is kept in their permanent files.

In 1972 a survey asked members to voluntarily report their continuing education activities. The results showed that the average practitioner participated regularly in a variety of continuing education activities. At the same time, the survey showed that members would not like mandatory continuing education requirements for membership in medical societies, for participation on hospital medical staffs, or for relicensure. Since that time, TMA's House of Delegates has continued to support the concept of voluntary continuing medical education.

For further information regarding Texas Medical Association's continuing education activities, contact the Texas Medicine Department or the Committee on Continuing Education, 1905 N Lamar Blvd, Austin, Tex 78705.

Continuing medical education requirements in the United States

STATE	CME REQUIREMENT FOR MEMBERSHIP IN STATE MEDICAL SOCIETY, EFFECTIVE DATE	MEDICAL PRACTICE ACT GIVING STATE LICENSING BODY AUTHORITY TO REQUIRE CME FOR RE-REGISTRATION OF LICENSE TO PRACTICE MEDICINE, EFFECTIVE DATE	STATE MEDICAL ASSOCIATION APPROVED BY AMA AS ACCREDITING AGENT FOR LOCAL CME
Alabama	7-1-76 150 hrs/3 yrs or PRA (Trial period 7-1-76 to 6-30-79); those who have not completed requirements by 6-30-82 lose membership		X
Alaska		1-1-77‡ Proposed: PRA, recertification by specialty board, any CME certification program sponsored by a state or state medical society equal to or exceeding PRA or 180 hrs/3 yrs (minimum 60 hrs Category 1)	X
Arizona	7-1-71 150 hrs/3 yrs (minimum 60 hrs categories 1-5 described by Ariz Medical Association), PRA, or certification by natl professional society	2-27-76* CME program certified by any natl, state or local medical society or by a college or university/3 yrs	X
Arkansas		1977‡	X
California	7-1-69 (voluntary) 75 hrs Group A-Required, 125 hrs Group B-Elective/3 yrs. (Minimum 15 hrs Group A/yr)	1-1-77* 100 hrs Category 1 hr/4 yrs	X
Colorado		3-1-77‡ Proposed: 150 hrs/3 yrs, PRA or AAFP	X
Connecticut			X
Delaware			X
District of Columbia	1-1-77 PRA		X
Florida	7-1-74 PRA, AAFP or 150 hrs/3 yrs (minimum 60 mandatory hrs as defined by Fla Medical Association)		X
Georgia			X
Hawaii		1976‡	X
Idaho			X
Illinois		11-19-75‡ Proposed: 50 hrs/2 yrs (As of 4-28-77, rules & regulations to implement law had not been signed or filed)	X
Indiana			X
Iowa			X
Isthmian Canal Zone			X
Kansas	6-30-78 PRA (or equivalent), AAFP, American College of Obstetricians & Gynecologists, College of American Pathologists/ American Society of Clinical Pathologists, or any other specialty society CME certification program recognized by AMA	150 hrs/3 yrs	X
Kentucky		9-1-72† 150 hrs or PRA/3 yrs	X
Louisiana			X
Maine	1973 150 hrs or PRA/3 yrs (minimum 20 hrs Category 1/yr)		X
Maryland		1977† 50 hrs (minimum 20 in Category 1), PRA or AAFP (documentation not required, but may be called for at any time)	X
Massachusetts	5-19-76 15 hrs or PRA/3 yrs		X
Michigan		1-1-77* 50 hrs/yr (minimum 25 hrs Category 1; maximum 12 in Category 2, 16 in Category 3, 15 in Category 4, 12 in Category 5)	X

* Law is enforced.
† Law is on the books, but has not been implemented.
‡ Specific requirements have not been determined.

Sources: American Medical Association, state medical societies.

STATE	CME REQUIREMENT FOR MEMBERSHIP IN STATE MEDICAL SOCIETY, EFFECTIVE DATE	MEDICAL PRACTICE ACT GIVING STATE LICENSING BODY AUTHORITY TO REQUIRE CME FOR RE-REGISTRATION OF LICENSE TO PRACTICE MEDICINE, EFFECTIVE DATE	STATE MEDICAL ASSOCIATION APPROVED BY AMA AS ACCREDITING AGENT FOR LOCAL CME
Minnesota	150 hrs or PRA/3 yrs (Current moratorium on membership requirement while licensing board considers mandatory CME for relicensure)	1-1-77†	X
Mississippi			X
Missouri			X
Montana	1-1-79 PRA or certification (or recertification) by recognized medical specialty society		X
Nebraska		1976† "In no instance may the board require a greater number of hours . . . than are available at approvedscientific schools, clinics, forums, lectures, courses of study or educational seminars within the State . . ."	X
Nevada			X
New Hampshire			X
New Jersey	1972 PRA		X
New Mexico		3-24-71* PRA, AAFP or 150 hrs/3 yrs	X
New York	Nov 1976 PRA, requirements of natl specialty organization, completion of recognized specialty society's self-evaluation exam, certification or recertification by specialty board, certificate of special competence by specialty board or service as resident in approved training program/3 yrs		X
North Carolina	May 1974 150 hrs, PRA or AAFP/3 yrs		X
North Dakota			X
Ohio		1-1-77* 150 hrs certified by Ohio State Medical Association & approved by state licensing board/3 yrs	X
Oklahoma			X
Oregon	1-1-69 (voluntary) 150 hrs/3 yrs		X
Pennsylvania	Nov 1970 PRA or equivalent		X
Puerto Rico			X
Rhode Island		1-1-77* 60 hrs/3 yrs (Documentation due with Nov 1979 application)	X
South Carolina			X
South Dakota	1-1-77 PRA		X
Tennessee			X
Texas			X
Utah		2-10-76* 120 hrs/3 yrs (minimum 20 hrs/yr): minimum 40 hrs Category 1; maximum 80 hrs Category 2, 40 hrs, Category 3	X
Vermont	May 1974 150 hrs/3 yrs		X
Virginia			X
Virgin Islands			X
Washington		7-1-76* PRA, AAFP, ACOG, American Society of Clinical Pathologists/ College of American Pathologists, or 150 hrs/3 yrs as outlined by licensing board	X
West Virginia			X
Wisconsin		1-1-77* Malpractice insurance legislation requires 15 hrs/yr	X
Wyoming			X

* Law is enforced.
† Law is on the books, but has not been implemented.
‡ Specific requirements have not been determined.

Sources: American Medical Association, state medical societies.

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

Warning
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

***Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis.

'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

FOR LONG-TERM CONTROL OF HYPERTENSION.* SERUM K^+ AND BUN SHOULD BE CHECKED PERIODICALLY. (SEE WARNINGS SECTION.)

SK&F CO., Carolina, P.R. 00630

SK&F CO.
a SmithKline company

Only 1 tablet B.I.D.

New convenienc

Gantanol® DS

sulfamethoxazole/Roche

double-strength dosage form for acute cystitis* patients

*nonobstructed; due to susceptible organisms

ew Gantanol® DS (sulfamethoxazole) tab-
s offer even greater convenience and
onomy for your patients with acute,
nobstructed cystitis due to susceptible
ains of *E. coli, Klebsiella-Aerobacter,*
aphylococcus, *Proteus mirabilis* and,
ss frequently, *Proteus vulgaris*...
e same amount of medication, the same
icacy, with only *half* the number of tablets
r day.
nplified dosage regimen encourages pa-
nt compliance: 2 tablets (1 Gm each)
AT—then 1 tablet B.I.D. for 10 to 14 days.
nical efficacy so basic you can start cys-
s therapy even before culture results are
ailable.

- In a clinical study of 406 patients on Gantanol (sulfamethoxazole) B.I.D., close to 9 out of 10 patients achieved negative urine cultures. While Gantanol tablets were used in this study, one Gantanol DS tablet has been proved bioequivalent to two Gantanol tablets.*

Gantanol is contraindicated during pregnancy, during the nursing period, and in infants under 2 months. During therapy, maintain adequate fluid intake, perform frequent CBC's and urinalyses with careful microscopic examination.

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.

and economy

fore prescribing, please consult complete product ormation, a summary of which follows:

lications: Acute, recurrent or chronic urinary tract infec-
ns (primarily pyelonephritis, pyelitis and cystitis) due to
sceptible organisms (usually *E. coli, Klebsiella-Aerobacter,*
phylococcus, *Proteus mirabilis* and, less frequently,
teus vulgaris), in the absence of obstructive uropathy or
eign bodies. Note: Carefully coordinate *in vitro* sul-
namide sensitivity tests with bacteriologic and clinical
sponse; add aminobenzoic acid to follow-up culture
edia. The increasing frequency of resistant organisms
its the usefulness of antibacterials including sul-
namides, especially in chronic or recurrent urinary tract
ections. Measure sulfonamide blood levels as variations
ay occur; 20 mg/100 ml should be maximum total level.

ntraindications: Sulfonamide hypersensitivity; preg-
ncy at term and during nursing period; infants less than
o months of age.

arnings: Safety during pregnancy has not been estab-
hed. Sulfonamides should not be used for group A
ta-hemolytic streptococcal infections and will not eradi-
te or prevent sequelae (rheumatic fever, glomerulone-
ritis) of such infections. Deaths from hypersensitivity reac-
ns, agranulocytosis, aplastic anemia and other blood
scrasias have been reported and early clinical signs
ore throat, fever, pallor, purpura or jaundice) may indi-
te serious blood disorders. Frequent CBC and urinalysis
th microscopic examination are recommended during
lfonamide therapy. Insufficient data on children under
with chronic renal disease.

ecautions: Use cautiously in patients with impaired renal
hepatic function, severe allergy, bronchial asthma; in glu-
se-6-phosphate dehydrogenase-deficient individuals in
om dose-related hemolysis may occur. Maintain ade-
ate fluid intake to prevent crystalluria and stone formation.

dverse Reactions: *Blood dyscrasias* (agranulocytosis,
plastic anemia, thrombocytopenia, leukopenia, hemolytic
emia, purpura, hypoprothrombinemia and methemo-
obinemia); *allergic reactions* (erythema multiforme, skin
uptions, epidermal necrolysis, urticaria, serum sickness,
pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis). *Usual adult dosage:* 2 Gm (2 DS tabs or 4 tabs or 4 teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: DS (double strength) tablets, 1 Gm sulfamethoxazole; Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

Basic therapy with convenience and economy:

Gantanol® (sulfamethoxazole)Roche®

Basic therapy with even more convenience and economy:

Gantanol® DS (sulfamethoxazole)Roche®

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

BURROUGHS WELLCOME CO. MAKES CODEINE COMBINATION PRODUCTS.

YOU MAKE THE CHOICE.

EMPIRIN® COMPOUND c̄ CODEINE #3

Each tablet contains:
codeine phosphate, 32 mg (gr ½),
(Warning: May be habit-forming);
aspirin, 227 mg; phenacetin, 162 mg;
and caffeine, 32 mg.

EMPRACET™ c̄ CODEINE #3

Each tablet contains:
codeine phosphate, 30 mg (gr ½),
(Warning: May be habit-forming);
and acetaminophen 300 mg.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

MEDICINE AND THE LAW

TEXAS SUPREME COURT PROTECTS CONFIDENTIALITY OF MINUTES OF HOSPITAL MEETINGS

In a recent opinion[1] the Texas Supreme Court refused to allow the plaintiffs in a medical malpractice suit to obtain copies of the meeting minutes of the defendant hospital, its board of directors, its medical staff, and its pediatric and other sections.

Facts

Plaintiffs filed suit against the hospital and two of its staff physicians for injuries suffered by their infant son. The child, born several weeks prematurely, was taken to the hospital, where, according to plaintiffs' allegations, he became blind as a result of prolonged overdoses of oxygen.

In preparing the case, the plaintiffs sought to obtain copies of minutes of all pediatric section meetings for several years, minutes of any other section meeting in which discussions occurred dealing with blindness from excess oxygen or related matters, minutes of any other pediatric section meeting in which there was discussion of the treatment of plaintiffs' child, minutes of general staff meetings for several years, and minutes of the hospital board of directors meetings with respect to purchases of nursery equipment and facilities.

The hospital asserted that these records were privileged and not subject to court subpoena by reason of Section 3 of Article 4447d,[2] which provides that "The records and proceedings of any hospital committee . . . shall be confidential and shall be used by such committee and the members thereof only in the exercise of the proper functions of the committee and shall not be public records and shall not be available for court subpoena; provided, however, that nothing herein shall apply to records made or maintained in the regular course of business by a hospital . . ."

Ruling

After holding a hearing and examining the records themselves, the trial court judge found that Article 4447d Section 3 did not apply to these proceedings, and even if it did, the records fell within the statutory exception for those "maintained in the regular course of business by a hospital."

The hospital went directly to the Supreme Court and sought a writ of mandamus to compel the trial court judge to withdraw his order compelling production of the minutes. The Supreme Court agreed with the hospital and held that the Legislature in enacting the statute "must have intended to protect and encourage open and thorough review and investigation by making the records and proceedings of *any* such committee confidential and by expressly providing that they 'shall not be available for subpoena.' " Also, the court stated that the "regular course of business" exception could not cover these records, since that interpretation would in effect nullify the entire privilege. The trial court judge was ordered to withdraw his order because the statute precluded discovery of all of the records sought by the plaintiffs.

Discussion

The court had no trouble dismissing the argument that these records fell within the "regular course of business" exception. This provision, said the court, applies only to records dealing with the treatment of individual patients and ad-

ministrative matters not part of committee deliberations.

The plaintiffs' major argument was that Section 3 of Article 4447d should be read in conjunction with Sections 1 and 2 of that statute. Section 1 deals with non-liability for furnishing confidential patient data to the state or other medical organization for use in the study of disease or for identification of persons needing immunizations; Section 2 provides safeguards upon the release of this information by the organization receiving it. Therefore, contended the plaintiffs, the privilege in Section 3 should only extend to information actually collected and used for medical research and education. This position was supported by statements in *French v Brodsky*, a decision of an intermediate court.[3]

The Supreme Court refused to adopt this interpretation; instead the court viewed the statute as designed to encourage "free and uninhibited discussion of all events and experiences within the hospital."

The limits, plaintiffs suggested, are not apparent in the literal language of Section 3, and the court felt bound to apply the statute exactly as the Legislature wrote it. "Records and proceedings of any hospital committee" means any committee, including the clinical departments, standing committees, general medical staff, and board of directors. It was noted, however, that the presentation of evidence or opinion to a hospital committee during its deliberations does not thereby make that evidence or opinion privileged if offered or proved by means apart from the committee records themselves. The effect of the statute is to prevent discovery and use of the records and proceedings of the committee.

Two Supreme Court justices filed dissenting opinions. One of the dissenters would follow the *French* case cited above and adopt the plaintiffs' position that only information collected for medical research and education under the first two sections of the act was privileged. The other dissenting justice took an intermediate position; he believed that the Legislative intent was to protect only those minutes and records from committees whose direct function is review of staff members, professional practices, and general hospital problems.

Although acknowledging the majority's reasoning that the statutory purpose was to foster a free exchange of information in an attempt to identify and correct problems and promote medical research and education, this justice would not extend the privilege to committees or groups with other functions. Under his theories, the records of the clinical departments, general meetings, and board of directors meetings would not be privileged unless the minutes covered matters dealing with review.

Conclusion

The Texas Supreme Court majority wisely perceived that the purpose of Section 3 of Article 4447d is to promote effective review of hospital personnel and procedures; that the intrusive interpretation asserted by plaintiffs might have a chilling effect on the openness of discussion; and that if groups within hospitals are to serve such purpose, their discussions should not be curtailed by the fear of exposure of statements made during the course of their deliberations and the possibility of litigation arising. The Supreme Court soundly applied both the "letter" and the "spirit" of this statute so as to achieve its legislative goal.

Jack D. Maroney, Will G. Barber
Brown, Maroney, Rose, Baker & Barber
TMA Legal Counsel

---

[1] *Texarkana Memorial Hospital v Jones*, 20 Tex. Sup. Ct. J. 278 (April 20, 1977, motion for rehearing overruled).
[2] Revised Civil Statutes of Texas.
[3] *French v Brodsky*, 521, S.W. 2d 670, 679 (Tex. Civ. App.-Houston [14th Dist.] 1975, writ ref'd n.r.e.).

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

TEXAS REPRESENTATIVES

A. F. Ennis, Jr. and B. C. Crim, Suite 210, 712 N. Washington, Dallas 75246 — Telephone (214) 821-4640
W. L. Kirk, 1508 Hermann Prof. Bldg., Houston 77030 — Telephone (713) 797-9835
M. C. Rollans, 408 GPM Bldg., South Tower, San Antonio 78216 — Telephone (512) 344-5901

KELSEY-SEYBOLD CLINIC

TEXAS MEDICAL CENTER ● 6624 FANNIN STREET ● HOUSTON, TEXAS 77030 ● AC (713) 797-1551

INTERNAL MEDICINE

Allergy
C. W. Ewing, M.D., F.A.C.A.
Arthritis and Rheumatic Diseases
J. W. Kemper, M.D., F.A.C.P.
M. S. Fischer, M.D.
Cardiology
E. F. Beard, M.D., F.A.C.P.
D. D. Goulden, M.D.
M. J. Mihalick, M.D.
Endocrine and Metabolic Diseases
M. P. Kelsey, M.D., F.A.C.P.
A. E. Leiser, M.D., F.A.C.P.
P. K. Champlon, Jr., M.D., F.A.C.P.
Gastrointestinal Diseases, Endoscopy
J. R. Kelsey, Jr., M.D., F.A.C.P.
P. S. Bentlif, M.D., F.A.C.P.
R. D. Eichhorn, M.D., F.A.C.P.
F. S. O'Neil, M.D., F.A.C.P.
J. W. McBee, M.D., F.A.C.P.
General Internal Medicine
G. E. Burke, M.D.
C. F. Taboada, M.D., F.A.C.P.
N. H. Nauert, Jr., M.D.
G. G. Bourianoff, M.D.
Hematology
J. B. Bart, M.D., F.A.C.P.
Infectious Diseases
S. Riggs, M.D., F.A.C.P.
Nuclear Medicine
D. E. Mouton, M.D., F.A.C.N.M.
Oncology
E. N. Root, M.D.
Pulmonary Diseases, Bronchoscopy
S. P. Fischer, M.D., F.A.C.P.
B. D. Walker, M.D.

DERMATOLOGY

W. M. Fraser, M.D., F.A.A.D.
D. W. Owens, M.D., F.A.A.D.

GENERAL & THORACIC SURGERY

Surgical Endoscopy & Colonoscopy
W. D. Seybold, M.D., F.A.C.S.
J. D. McMurrey, M.D., F.A.C.S.
J. L. Doggett, M.D., F.A.C.S.
M. F. Appel, M.D., F.A.C.S.

NEUROLOGY

W. R. Seybold, M.D.

OBSTETRICS & GYNECOLOGY

M. L. Cody, M.D., F.A.C.S., F.A.C.O.G.
W. A. Johnson III, M.D., F.A.C.O.G.
A. G. Guette, M.D.

OCCUPATIONAL & PREVENTIVE MEDICINE

M. B. Johnston, M.D., F.A.C.Pr.M.
H. B. Elwell, Jr., M.D.
R. M. Fenno, M.D., F.A.C.P.
F. A. Goss, M.D.
W. R. Hawkins, M.D., F.A.C.Pr.M.
W. R. Hein, M.D., F.A.C.Pr.M.
L. A. Herrmann, M.D.
G. F. Kelly, M.D., F.A.C.Pr.M.
J. Mackay, M.D.
C. A. Owen, M.D., F.A.C.S.
B. W. Prior, M.D., F.A.C.Pr.M.
N. A. Tadros, M.D., F.A.C.Pr.M.
A. M. Wyss, M.D., F.A.C.Pr.M.
R. J. Huebner, M.D.
T. K. Lee, M.D., M.P.H.

OPHTHALMOLOGY

H. E. Wahlen, M.D., D.A.B.O.
J. E. Key, II, M.D., D.A.B.O.

ORTHOPEDIC SURGERY

R. A. Fulford, M.D., F.R.C.S. (C)
T. H. Crouch, M.D., F.A.C.S.

OTOLARYNGOLOGY

J. C. Dickson, M.D., F.A.C.S.
J. L. Smith, M.D., F.A.C.S.
L. P. Conrad, M.D.

PATHOLOGY

R. A. Jordan, M.D., F.A.S.C.P.

PEDIATRICS

Rheumatology
E. J. Brewer, Jr., M.D., F.A.A.P.
Allergy and Pulmonary Diseases
C. W. Ewing, M.D., F.A.A.P.
Gastroenterology
G. D. Ferry, M.D., F.A.A.P.
General Pediatrics and Consultation
F. J. Boland, M.D., F.A.A.P.
R. M. Thaller, M.D., F.A.A.P.
K. C. Pinckard, M.D.

PSYCHIATRY

C. G. Cochran, M.D.
R. Daichman, M.D.

RADIOLOGY

R. J. Kurth, M.D., F.A.C.R.
E. G. Linares, M.D.
P. Raphael, M.D.

UROLOGY

D. W. Pranke, M.D., F.A.C.S.
F. M. Fry, M.D.

DENTISTRY

J. W. Orr, D.D.S.
D. L. McClung, D.D.S.

SPEECH PATHOLOGY & AUDIOLOGY

D. R. Fox, Ph.D.
J. W. Porter, M.A.
N. Shulak, M.A.

EXECUTIVE DIRECTOR

J. A. Bakken, F.A.C.M.G.A.

K-S WEST

1111 Augusta Drive
Houston, Texas 77057
(713) 780-1661

K-S DOWNTOWN

Two Houston Center, Suite P-310
909 Fannin Street, Houston, Texas
77002 (713) 654-4401

Medical Newsmakers

George T. Bryan, MD

Barbara Jordan

Winfrey W. Goldman, Jr, MD

GEORGE T. BRYAN, MD, is the new dean of the School of Medicine at The University of Texas Medical Branch in Galveston. Dr Bryan has served as acting dean since October 1976. His involvement with academic medicine began in 1963 with his appointment as assistant professor of pediatrics at the Medical Branch. He has also served as a clinical associate in pediatrics in the Laboratory of Clinical Investigations at the National Institute of Allergy and Infectious Diseases; acting head, pediatric service, National Institute of Health; and pediatrician, Clinical Endocrinology Branch, National Heart Institute, National Institute of Health.

DAVID A. GREENSPAN, MD, a Houston ophthalmologist, has been appointed to the Industrial Eye Health and Safety Committee of the National Society for the Prevention of Blindness. The committee is responsible for recommending policies and objectives for the society's industrial and school eye safety programs. Dr Greenspan is medical chairman of the Gulf Coast branch of the Texas Society for the Prevention of Blindness.

GEORGIA LEGETT, MD, Austin gynecologist, has been honored by the Austin chapter of Women in Communications, Inc, as one of six outstanding Austin women noteworthy for their contributions to their community. Dr Legett has served as Medical Director of Austin Planned Parenthood Center and helped develop five federally funded family planning clinics in Austin. She is a Fellow of the American College of Obstetricians and Gynecologists.

US REP BARBARA JORDAN is the first Honorary Fellow of the Texas School Health Association. School physicians, school nurses, health educators, and others concerned with the health of school-age children are members of the association. Rep Jordan is a member of the House Committee on the Judiciary, the House Committee on Government Operations, and the Steering and Policy Committee of the House Democratic Caucus.

WINFREY W. GOLDMAN, JR, MD, is the new chairman of the Department of Family Practice and Community Medicine of Southwestern Medical School, a component of The University of Texas Health Science Center at Dallas. For the last 16 years, Dr Goldman has been involved in planning, developing, implementing, improving, and managing general practice and family practice residency programs at John Peter Smith Hospital, Dallas. After service in the United States Air Force, Dr Goldman joined the Southwestern faculty and has held several academic appointments at the school.

ROBERT M. ROSE, MD, professor of psychiatry and chief of the department of psychosomatic medicine at Boston University School of Medicine, has been appointed chairman designate of the department of psychiatry at The University of Texas Medical Branch. Dr Rose also serves as associate visiting physician in psychiatry, University Hospital in Boston, as assisting physician, psychiatry service at Boston City Hospital, and as a consultant to the Yerkes Regional Primate Research Center in Atlanta.

STANLEY H. APPEL, MD, chief of the division of neurology at Duke University Medi-

cal Center, has been appointed professor and chairman of the department of neurology at Baylor College of Medicine. The new chairman will also be director of Baylor's Jerry Lewis Neuromuscular Disease Research Center. Dr Appel is chairman of the Scientific Advisory Council for the National Huntington's Disease Association, a member of the Scientific Advisory Committee of the Amyotrophic Lateral Sclerosis Society of America, and a member of the Clinical Committee of the International Society of Neurochemistry.

Ball State University has awarded an honorary Doctor of Science degree to JOHN P. McGOVERN, MD, the director of the McGovern Allergy Clinic and director of the Texas Allergy Research Foundation. Dr McGovern was cited for his commitment to the health, education, and well being of school age children and for his extraordinary contributions in the field of medicine as an allergist. Dr McGovern serves as clinical professor of allergy and professor and chairman of the Department of the History of Medicine at the University of Texas Graduate School of Biomedical Sciences and professor of pediatrics and microbiology and director of the Allergy Research Laboratory at Baylor College of Medicine.

STANLEY J. DUDRICK, MD, professor and chairman of the Department of Surgery at The University of Texas Medical School at Houston, is one of 12 recipients of the Award for Distinguished Achievement, presented by the editors of *Modern Medicine*. Dr Dudrick, also chief of surgery at Hermann Hospital, has done work in developing parenteral hyperalimentation.

NORMAN F. GANT, MD, who has developed a new test procedure for diagnosing complications of pregnancy, has been named permanent chairman of the Department of Obstetrics and Gynecology at The University of Texas Southwestern Medical School. Dr Gant had been acting chairman of the department since January. He is a diplomate of the American Board of Obstetrics and Gynecology and a fellow in the American College of Obstetricians and Gynecologists.

ALLEN J. CAHILL, MD, a Dallas physician, is the new president of the Texas Society of Child Psychiatry. Lawrence Claman, MD, a Dallas physician, is the new president-elect.

EDWARD N. BRANDT, JR, MD, executive dean of The University of Texas Medical Branch at Galveston, has been named associate deputy chancellor for health affairs of The University of Texas System. Dr Brandt, who is also a professor of family medicine and preventive medicine and community health at Galveston, has been associated with the Medical Branch since 1970 in a variety of administrative positions.

WILLIAM F. ROSS, MD, San Benito, has been chosen to direct the Southwest's largest family practice training program. Dr Ross will assume chairmanship of the Division of Family Practice at The University of Texas Southwestern Medical School July 1. Dr Ross had been in private practice in San Benito since 1955. Dr Ross is president-elect of the Texas Institute for Medical Assessment and is chairman of the TMA Council on Medical Education and Hospitals.

Robert M. Rose, MD

Stanley H. Appel, MD

John P. McGovern, MD

Medicine in literature

EDITOR'S NOTE: This month's bibliography, prepared by the staff of TMA's Memorial Library, lists publications related to Reye's syndrome. These and other publications pertaining to this topic are available from the Memorial Library.

REYE'S SYNDROME

Applebaum MM, Thaler MM: Reye Syndrome without initial hepatic involvement. *Am J Dis Child* 131(3):295-296, 1977.

Chaves-Carballo E, Gomez MR, Sharbrough FW: Encephalopathy and fatty infiltration of the viscera (Reye-Johnson syndrome): a 17-year experience. *Mayo Clin Proc* 50(4):209-215, 1975.

Corey L, Rubin RJ, Hattwick MAW, et al: A nationwide outbreak of Reye's syndrome; its epidemiologic relationship to influenza B. *Am J Med* 61(5):615-625, 1976.

DeVivo DC, Keating JP: Reye's syndrome. *Adv Pediatr* 22:175-229, 1976.

Gelfman NA, Kranwinkel RN, Pezzimenti JF, et al: Reye's syndrome treated by hemodialysis; a case report. *Conn Med* 39(7): 405-407, 1975.

Harris HB, Vogler LB, Cassady G: Reye's syndrome in a neonate. *South Med J* 69 (11):1511-1512, 1976.

Hutton JT, Levy BS, Hosfield WB: Reye's syndrome. *Am Fam Physician* 11(3):146-150, 1975.

Lovejoy FH Jr, Bresnan MJ, Lombroso CT, et al: Anticerebral oedema therapy in Reye's syndrome. *Arch Dis Child* 50(12): 933-937, 1975.

Lovejoy FH Jr, Smith AL, Bresnan MJ, et al: Clinical staging in Reye syndrome. *Am J Dis Child* 128:36-41, July 1974.

Partin JC: Reye's syndrome (encephalopathy and fatty liver); diagnosis and treatment. *Gastroenterology* 69(2):511-518, 1975.

Pollack JD (ed): *Reye's Syndrome; Proceedings of the Reye's Syndrome Conference, Sponsored by the Children's Hospital Research Foundation, Columbus, Ohio.* New York, Grune & Stratton, 1974. WL 348 R457r 1974.

Rubin FL, Streiff EJ, Neal M, et al: Epidemiologic studies of Reye's syndrome: cases seen in Pittsburgh, October 1973-April 1975. *Am J Public Health* 66 (11): 1096-1098, 1976.

Schubert WK, Bobo RC, Partin JC, et al: Reye's syndrome. *DM:*1-30, December 1975.

Schiff GM: Reye's syndrome. *Annu Rev Med* 27:447-452, 1976.

Shannon DC, De Long R, Bercu B, et al: Studies on the pathophysiology of encephalopathy in Reye's syndrome: hyperammonemia in Reye's syndrome. *Pediatrics* 56(6):999-1004, 1975.

Tang TT, Good TA, Dorrington AJ, et al: Reye's syndrome; clinical delineation and evaluation. *Wis Med J* 73:S49-54, May 1974.

Tang TT, Siegesmund KA, Sedmak GV, et al: Reye syndrome; a correlated electronmicroscopic, viral, and biochemical observation. *JAMA* 232(13):1339-1346, 1975.

Turel AP Jr, Levinsohn MW, Derakhshan I, et al: Reye syndrome and cerebellar intracytoplasmic inclusion bodies. *Arch Neurol* 32:624-628, September 1975.

van Caillie M, Morin CL, Roy CC, et al: Reye's syndrome: relapses and neurological sequelae. *Pediatrics* 59(2):244-249, 1977.

IN THE TMA LIBRARY

American Hospital Association: *CT Scanners: A Technical Report.* Chicago, American Hospital Association, 1977.

American Medical Association Department of Drugs, American Society for Clinical Pharmacology and Therapeutics: *AMA Drug Evaluations,* ed 3. Littleton, Mass, Publishing Sciences Group, Inc, 1977.

Andrews W (ed): *The Doctor in History, Literature, Folk-Lore, Etc.* Detroit, Gale Research Co, 1970.

Berry LH: *Gastrointestinal Pan-Endoscopy, Esophagoscopy, Gastroscopy, Bulbar and Postbulbar Duodenoscopy, Procto-Sigmoidoscopy, Colonoscopy and Peritoneoscopy.* Springfield, Ill, Charles C Thomas, 1974.

Beyond Tomorrow, Trends and Prospects in Medical Science, A Seventy-Fifth Anniversary Conference, March 8, 1976. Rockefeller University, 1977.

Burgess AW, Holmstrom LL: *Rape: Victims of Crisis.* Bowie, Md, Robert J Brady Co, 1974.

Eikelaar HR: *Arthroscopy of the Knee.* Groningen, Hoitsema, 1976.

Fox SL: *Industrial and Occupational Ophthalmology,* Springfield, Ill, Charles C Thomas, 1973.

Gilliam JE (ed): *Identification and Management of the Brain Damaged Child, A Symposium Sponsored by United Cerebral Palsy Association of Texas in Cooperation with The Texas Medical Association.* 1976.

Haagensen CD: *Diseases of the Breast,* ed 2. Philadelphia, WB Saunders Co, 1971.

Henderson JW, Farrow GM, Devine KD, et al: *Orbital Tumors.* Philadelphia, WB Saunders Co, 1973.

Hersh EM, Gutterman JU, Mavligit G: *Immunotherapy of Cancer in Man, Scientific Basis and Current Status.* Springfield, Ill, Charles C Thomas, 1973.

Hill GL: *Ileostomy: Surgery, Physiology, and Management.* New York, Grune & Stratton, 1976.

Josiah Macy, Jr Foundation: *Physicians for the Future, Report of the Macy Commission.* New York, Josiah Macy, Jr Foundation, 1976.

Kay MA, Meredith JD, Redlinger W, et al: *Southwestern Medical Dictionary.* Tucson, Ariz, University of Arizona Press, 1977.

Kelman CD: *Phacoemulsification and Aspiration: The Kelman Technique of Cataract Removal.* Birmingham, Ala, Aesculapius Publishing Co, 1975.

Kittler GD: *Control for Cancer, Laetrile (The Anti-Cancer Drug).* New York, Ivan Obolensky, Inc, 1963.

Laufman AK: *The Law of Medical Malpractice in Texas, A Primer for the Medical Community.* Austin, Tex, University of Texas Press, 1977.

Lawry JV: *Essential Concepts of Clinical Physiology.* Sunderland, Mass, Sinauer Associates, Inc, 1977.

Millingen JG: *Curiosities of Medical Experience,* ed 2. Detroit, Singing Tree Press, 1969.

Nagaishi C, Nagasawa N, Okada Y, et al: *Functional Anatomy and Histology of the Lung.* Baltimore, University Park Press, 1972.

National Safety Council: *Handbook of Occupational Safety and Health.* Chicago, National Safety Council, 1976.

O'Brien CP, Wesson DR, Schnoll SH: *Diagnosis and Evaluation of the Drug Abusing Patient for Treatment Staff Physicians, I.* Dendy RF (ed).

Olishifski JB, McElroy FE (eds): *Funda-*

mentals of Industrial Hygiene. Chicago, National Safety Council, 1976.

Onesti G, Lowenthal DT (eds): *The Spectrum of Antihypertensive Drug Therapy, Guidelines for the Clinician, Proceedings of a Seminar in Therapeutics, The Hahnemann Medical College and Hospital of Philadelphia, November 1976*. New York, Biomedical Information Corp, 1977.

Preventive Medicine USA, Task Force Reports Sponsored by The John E. Fogarty International Center for Advanced Study in the Health Sciences, National Institutes of Health and The American College of Preventive Medicine. New York, Prodist, 1976.

Rives JD: *Essays of a Louisiana Surgeon*, Sparkman RS (ed). New Orleans, James D Rives Surgical Society, 1977.

Rudowski W, Nasilowski W, Zietkiewicz W, et al: *Burn Therapy and Research*. Baltimore, Johns Hopkins University Press, 1976.

Ruppel G: *Manual of Pulmonary Function Testing*. St Louis, CV Mosby Co, 1975.

Schlossberg L: *The Johns Hopkins Atlas of Human Functional Anatomy*, Zuidema GD (ed). Baltimore, Johns Hopkins University Press, 1977.

Schmidek ME, Layne MA, Lempert BL, et al: *Survey of Hearing Conservation Programs in Industry*. Cincinnati, US Department of Health, Education, and Welfare, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, Division of Laboratories and Criteria Development, 1975.

Sieverts S: *Health Planning Issues and Public Law 93-641*. Chicago, American Hospital Association, 1977.

Sussman LN: *Paternity Testing by Blood Grouping*, ed 2. Springfield, Ill, Charles C Thomas, 1976.

Veatch RM: *Death, Dying, and the Biological Revolution, Our Last Quest for Responsibility*. New Haven, Conn, Yale University Press, 1976.

Williams RA (ed): *Textbook of Black-Related Diseases*. New York, McGraw-Hill Book Co, 1975.

"I have flunked preventive medicine again."

Thiazides and hypertension

A balancing act: Blood pressure reduction vs potassium depletion

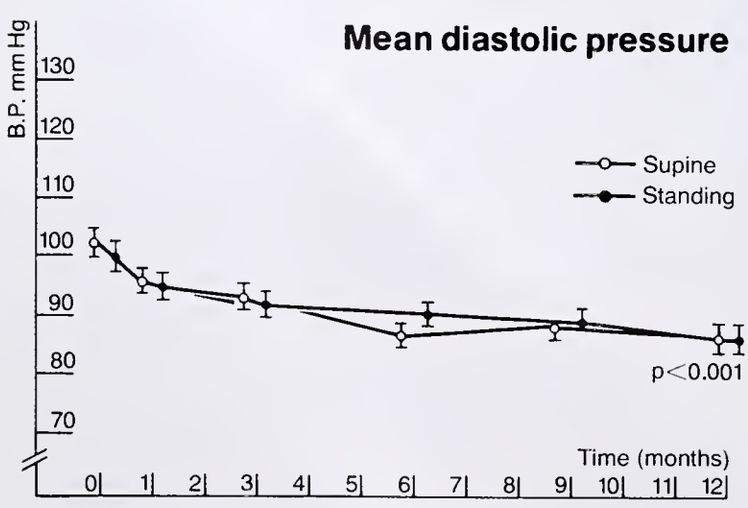
From a 1-year study of 18 patients with mild uncomplicated hypertension published in The Lancet*

Once a day

Naturetin®

Bendro-
flumethiazide
Tablets N.F.

Diastolic blood pressure down 12-15%



"The mean pretreatment blood pressure was 170/103 mm Hg (supine) and 166/100 mm Hg (standing). Diastolic pressure continued to fall over the first 6 months and then there was no further change up to 1 year...The mean blood pressure at 12 months was 153/88 mm Hg (supine) and 142/88 mm Hg (standing)."

"The patients were receiving a single daily dose of 10 mg bendrofluazide [bendroflumethiazide]...there were no apparent side effects from the medication."

*Wilkinson PR et al: The Lancet 1:759-762, 1975.

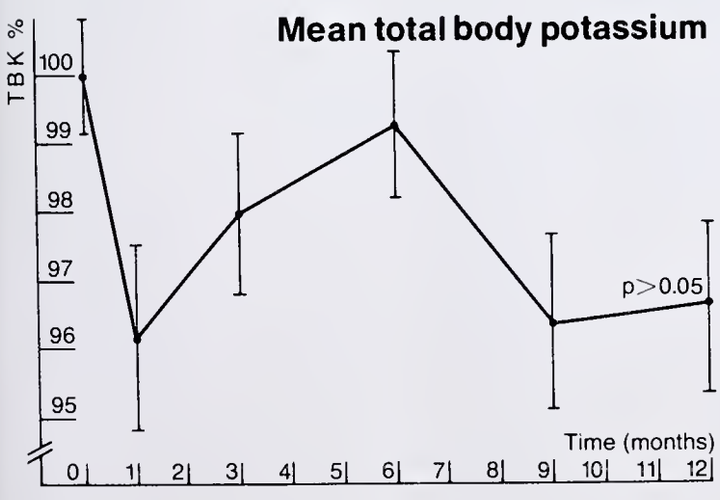
Once a day

Naturetin®

Bendro-
flumethiazide
Tablets N.F.

2.5, 5 and 10 mg

Potassium stabilized at 96% mean TBK



"The amount of potassium loss during the period of study did not seem to be clinically significant."

"A serum potassium of less than 3.5mmol per litre is often taken as the value below which potassium supplements should be given...At an arbitrary lower value for serum potassium of 3.0mmol per litre, few patients, our data suggest, would need potassium supplements. Our findings with TBK support this view..."

See next page for full prescribing information.

Once a day
Naturetin®
Bendroflumethiazide Tablets N.F.

NATURETIN®-2.5
NATURETIN®-5
NATURETIN®-10
Bendroflumethiazide Tablets N.F.

DESCRIPTION

Naturetin (Bendroflumethiazide Tablets N.F.) is a benzothiadiazine derivative containing a benzyl and a trifluoromethyl group. It is a potent oral diuretic and antihypertensive agent available as compressed tablets providing 2.5, 5.0, or 10 mg. bendroflumethiazide.

ACTIONS

The mechanism of action results in an interference with the renal tubular mechanism of electrolyte reabsorption. At maximal therapeutic dosage all thiazides are approximately equal in their diuretic potency. The mechanism whereby thiazides function in the control of hypertension is unknown.

INDICATIONS

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated as adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis and corticosteroid and estrogen therapy.

Bendroflumethiazide has also been found useful in edema due to various forms of renal dysfunction such as: nephrotic syndrome, acute glomerulonephritis, and chronic renal failure.

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated in the management of hypertension either as the sole therapeutic agent or to enhance the effectiveness of other antihypertensive drugs in the more severe forms of hypertension.

Usage in Pregnancy. The routine use of diuretics in an otherwise healthy woman is inappropriate and exposes mother and fetus to unnecessary hazard. Diuretics do not prevent development of toxemia of pregnancy, and there is no satisfactory evidence that they are useful in the treatment of developed toxemia.

Edema during pregnancy may arise from pathological causes or from the physiologic and mechanical consequences of pregnancy. Thiazides are indicated in pregnancy when edema is due to pathologic causes, just as they are in the absence of pregnancy (see WARNINGS). Dependent edema in pregnancy, resulting from restriction of venous return by the expanded uterus, is properly treated through elevation of the lower extremities and use of support hose; use of diuretics to lower intravascular volume in this case is illogical and unnecessary. There is hypervolemia during normal pregnancy which is harmful to neither the fetus nor the mother (in the absence of cardiovascular disease), but which is associated with edema, including generalized edema, in the majority of pregnant women. If this edema produces discomfort, increased recumbency will often provide relief. In rare instances, this edema may cause extreme discomfort which is not relieved by rest. In these cases, a short course of diuretics may provide relief and may be appropriate.

CONTRAINDICATIONS

Bendroflumethiazide is contraindicated in anuria.

It is also contraindicated in patients who have previously demonstrated hypersensitivity to it or other sulfonamide-derived drugs.

WARNINGS

Bendroflumethiazide should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may be additive or may potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

Usage in Pregnancy. Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers. Thiazides appear in breast milk. If use of the drug is deemed essential, the patient should stop nursing.

PRECAUTIONS

Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: dryness of the mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Latent diabetes mellitus may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use. If emergency surgery is indicated, preanesthetic and anesthetic agents should be administered in reduced dosage.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS

Gastrointestinal System: anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), and pancreatitis. *Central Nervous System:* dizziness, vertigo, paresthesia, headache, and xanthopsia. *Hematologic:* leukopenia, agranulocytosis, thrombocytopenia, and aplastic anemia. *Dermatologic-Hypersensitivity:* purpura, photosensitivity, rash, urticaria, and necrotizing angiitis (vasculitis, cutaneous vasculitis). *Cardiovascular:* orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates or narcotics. *Other:* hyperglycemia, glycosuria, occasional metabolic acidosis in diabetic patients, hyperuricemia, allergic glomerulonephritis, muscle spasm, weakness, and restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION

Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

Diuretic: The usual dose is 5 mg. once daily, preferably given in the morning. To initiate therapy, doses up to 20 mg. may be given once daily or divided into two doses. A single daily dose of 2.5 to 5 mg. should suffice for maintenance.

Alternatively, intermittent therapy may be advantageous in many patients. By administering the preparation every other day or on a three to five day per week schedule, electrolyte imbalance is less likely to occur; however, the possibility still exists.

In general, the lowest dosage that achieves the therapeutic response should be employed.

Antihypertensive: The suggested initial dosage is 5 to 20 mg. daily. Maintenance dosage may range from 2.5 to 15 mg. per day, depending on the individual response of the patient. When the diuretic is used with other antihypertensive agents, lower maintenance doses for each drug are usually sufficient.

STORAGE

Store at room temperature; avoid excessive heat.

HOW SUPPLIED

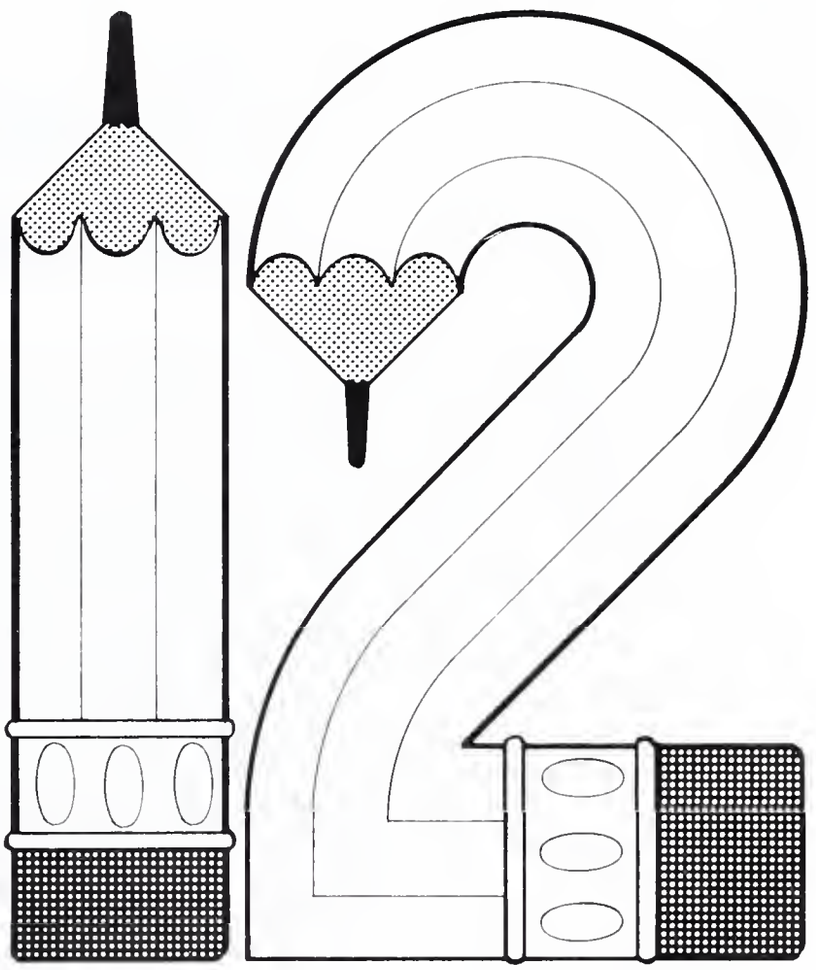
2.5 mg. tablets in bottles of 100, 5 mg. tablets (scored) in bottles of 100 and 1000, and 10 mg. tablets (scored) in bottles of 100.

SQUIBB®

©1977 E.R. Squibb & Sons, Inc. 477-501

Texas Medicine Award competition

Be published in Texas Medicine, the monthly journal of the Texas Medical Association, and win a $250 cash award



'o NEW categories include Category A,)aper written in a training situation by a xas medical student, graduate student, sident, or fellow under age 35; and Cate- ry B, a paper written by any Texas ysician under age 35 not in a training uation.

ticles must deal with a subject within the alm of the basic sciences or clinical medi- ıe and must be original and unpublished. anuscripts should include either Category or Category B designation with informa- ın about the author's training or practice uation. No maximum nor minimum length required. Criteria for the judging will be cellence of scientific work and compe- nce in the writing craft. DEADLINE for tries is August 1, 1977.

Mail entries and inquiries to Executive Editor, Texas Medicine, 1905 N. Lamar Blvd., Austin, Texas 78705 or call Texas Medicine Department 512-477-6704.

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

J. R. DARNALL
Austin, 1894-1976

W. R. POLLARD
El Paso, 1935-1976

ANNIE T. LAMM
Harlingen, 1907-1976

JOE T. NELSON
Weatherford, 1923-1977

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a perma nent memorial to physicians who have served their patients, their professio and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing mo than 10,000 reference requests, 3,500 tapes and cassettes, and 2,50 films each year to physicians, students, and to those seeking informatio related to medicine and health care. The resources of the Library includ 60,000 volumes, 400 tapes, and 300 scientific and lay films; more tha 1,300 professional journals are received monthly. Services are provide without charge.

Contributions to the Texas Medical Memorial Library Fund are invested i a permanent fund and are managed by the Board of Trustees of the Texa Medical Association. Dividends are used to purchase new books and t operate the Library.

TEXAS MEDICAL MEMORIAL LIBRARY FUND

1801 N. Lamar Blvd., Austin, Texas 78701

I enclose the amount of $_____. Given in Memory of _____

Please send remembrance card to:

Name _____

Address _____

City and State _____

Donor Information:

Name _____

Address _____

City and State _____

Deaths

J. R. Darnall, MD

Dr Joseph Rogers Darnall, Austin, whose military career spanned 35 years, died Aug 26, 1976.

While in the US Army Medical Corps, Dr Darnall was awarded numerous honors, including the Legion of Merit; Army Commendation Ribbon and Pendant, with Oak Leaf Cluster; Purple Heart; World War I Victory Medal; and World War II Victory Medal. He retired from military service in 1953 with the rank of colonel.

As Chief of Hospitalization in the European Theater of Operations during World War II, Dr Darnall directed the largest hospital program in history. In this capacity, he supervised the establishment and administration of 161 fixed military hospitals with more than 220,000 beds. During 1950-1953, he commanded the 97th General Army Hospital in Frankfurt, Germany. While in the service, Dr Darnall also practiced in France, the Philippines, the Panama Canal Zone, and throughout the United States.

Dr Darnall was the author of *What the Citizen Should Know about Wartime Medicine,* which was published in 1942. He also wrote 45 articles for various medical journals.

He was a member of the American Medical Association, American College of Physicians, American Society of Tropical Medicine, Association of Military Surgeons of the United States, the Isthmian Canal Zone Medical Association (past secretary-treasurer and vice-president), Royal Medical Society, Philippine Islands Medical Association, and Travis County Medical Society.

Surviving Dr Darnall are his wife, Clara Barclay Darnall; daughters, Eleanor Barclay Darnall and Dorothy D. Lineback; and son, Joseph Rogers Darnall, Jr, all of Austin; one granddaughter and two grandsons.

W. R. Pollard, MD

Dr William Robert Pollard, 41, of El Paso died Oct 25, 1976.

Dr Pollard, a radiologist, had lived in El Paso since 1964. He was a native of Eugene, Ore, and was graduated from the University of Oregon Medical School. His internship and residency were at Tripler Army Medical Center, Honolulu. He also held a residency at Walter Reed Army Medical Center, Washington, DC.

Dr Pollard, who was a major in the US Army, was buried with full military honors. He retired from the service in 1968. He was chief of radiology at William Beaumont Army Medical Center, El Paso, before entering private practice.

His professional memberships included El Paso County Medical Society, American Medical Association, and the American College of Radiology. He also was a member of Coronado Christian Church and Phi Beta Pi medical fraternity.

Surviving Dr Pollard are his wife, Mary Shirey Pollard, and son, William Pollard, both of El Paso; daughters, Marilyn Caroll, Kathy Pollard, Susan Pollard, and Janice Pollard, all of Phoenix, Ariz, and Nancy Lauassade, Dallas; parents, Dr and Mrs W. T. Pollard, Junction City, Ore; brother, Dr Thomas Pollard, El Paso; and two sisters.

Dr Darnall

Dr Pollard

Annie T. Lamm, MD

Dr Annie Thea Lamm, a Harlingen physician, died Oct 6, 1976, of a cerebral hemorrhage. She was 69 years of age.

An honorary member of Texas Medical Association, Dr Lamm had practiced in the Rio Grande Valley since 1939. She was on the medical staff of Valley Baptist Medical Center.

Dr Lamm

Dr Nelson

Dr Lamm was born in Bischwitz bei Breslau, Germany, and completed her medical education at the University of Breslau. She was an intern in Berlin (1933) and at the Jewish Hospital in Breslau (1933-1934). She held the position of assistant surgeon at the Jewish Hospital during 1934-1936. In 1937, Dr Lamm came to the United States with her husband, the late Heinrich Lamm, MD, and their son.

Dr Lamm was a member of the Cameron-Willacy County Medical Society, American Medical Association, and a retired member of the Texas Society of Anesthesiologists and the American Society of Anesthesiologists.

Surviving Dr Lamm are her son, Michael Lamm, Stockton, Calif; daughter, Mrs Robert J. Kirschner, Rosemont, Pa; and five grandchildren.

Joe T. Nelson, MD

Dr Joe Thomas Nelson, a leader in medical education and service, died April 11, 1977.

Dr Nelson, 53, was a member of the Texas Medical Association Board of Trustees. He also was a past member of the Boards of Regents of North Texas State University and The University of Texas System. He was chairman of the Medical Affairs Committee of the UT System Board. He was a member of the American Medical Association Board of Trustees, Chairman of the Board of Directors of TEXPAC and a member of the Board of Directors of AMPAC.

A native of Munday, Tex, Dr Nelson received his bachelor of science degree from North Texas State University in 1947. He completed his medical education at Baylor College of Medicine in 1951 and was an intern at City-County Hospital, Fort Worth, from 1951 to 1952. He had practiced family medicine in Weatherford, Tex, since 1952.

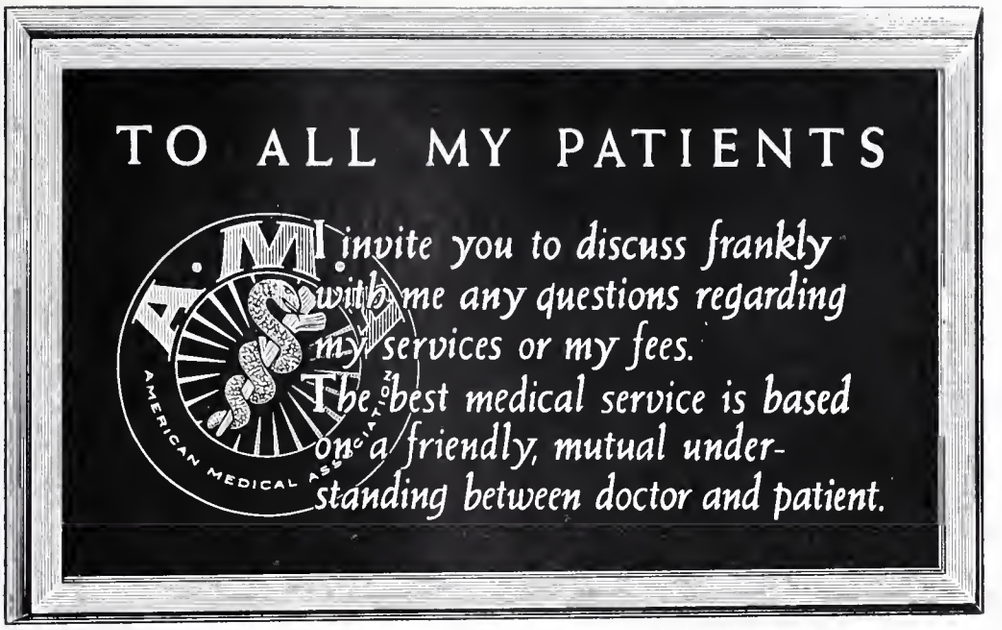
In addition to TMA and the AMA, Dr Nelson's professional memberships included Parker County Medical Society, Southern Medical Association (former president and trustee), Texas Academy of Family Physicians and American Academy of Family Physicians.

He also was a member of the West Texas Chamber of Commerce, Council of State Chambers, American Institute of Management and the Newcomen Society of North America. He served in the US Navy from 1942 to 1946.

Dr Nelson received the 1976 Distinguished Service Award in recognition of his outstanding contributions to Texas Medical Association. He had served as chairman of the TMA Council on Legislation during 1965-1970, a consultant to the Council on Medical Education and Hospitals since 1973, a member of the Executive Board since 1962, and a member of the Board of Trustees since 1972.

Dr Nelson's other honors included Outstanding Citizen, Weatherford, Tex, 1963; Distinguished Alumni Award, John Peter Smith Hospital, Fort Worth, 1972; Distinguished Service Award, Southern Medical Association, 1970; Outstanding Alumnus Award, Baylor College of Medicine, 1973; and President's Outstanding Alumnus Award, North Texas State University, 1976. He also was listed in *Who's Who in the South and Southwest*.

Surviving Dr Nelson are his wife Varina LeBeau Nelson, Weatherford; daughter, Renee Nelson, Houston; mother, Mrs Clyde Nelson, Munday, Tex; three sisters and one brother.


TO ALL MY PATIENTS
I invite you to discuss frankly with me any questions regarding my services or my fees.
The best medical service is based on a friendly, mutual understanding between doctor and patient.
A·M·A
AMERICAN MEDICAL ASSOCIATION

Do Your Patients Understand Your Fees?

Patients hesitate to ask about fees. But they **want** to know. They naturally worry about what their medical costs will be. And if they don't feel free to talk about it, serious problems—misunderstanding, resentment and even deep hostility—can arise, threatening the all-important rapport between you and your patients.

Open discussion **before** treatment prevents such embarrassing problems. It paves the way for mutual understanding and good will.

An AMA Fee Plaque, prominently displayed in your waiting room, serves as an open invitation for your patients to discuss medical costs and financial problems with you. It shows that you care. Just seeing the message can give many financially worried patients peace of mind.

The AMA Fee Plaque works hard to prevent doctor-patient misunderstandings. And it works well.

Suitable for wall or desk display, the plaque measures 6″ x 10½″. The lettering is white on a dark brown background and the frame is durable beige plastic.

How do you obtain one?

Just mail the coupon below and your check, or money order, for $2.40 (postage paid). Your Fee Plaque will be sent to you by return mail.

Order Department
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610

Please send me_____A.M.A. fee plaques, offered at only $2.40 each. Enclosed is my check or money order for $_____.

Name_____

Address_____

City_____ State_____ Zip Code_____

MEDICAL ARTS CLINIC ASSOCIATION of corsicana

ANESTHESIOLOGY
LARRY R. STEVENER, M.D., F.A.C.A.*

DERMATOLOGY & SYPHILOLOGY
JOSEPH M. GLICKSMAN, M.D., F.A.A.D.*
J. D. SMITH, M.D., F.A.A.D.*

FAMILY PRACTICE
ENNIS, TEXAS
W. B. KINZIE, MD., D.A.B.F.P.

GENERAL & VASCULAR SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S*
E. SCOTT MIDDLETON, M.D., F.A.C.S.*

GENERAL, VASCULAR & THORACIC SURGERY
ROSS B. REAGAN, M.D.*

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
ALLEN M. JONES, M.D.*
JOHN D. NELSON, M.D.*
L. BRYAN COTTON, JR., M.D.*
KENT ROGERS, M.D.*
JACK B. BANKHEAD, M.D.

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
W. GENE MURFF, M.D., F.A.C.O.G.*
NEAL GREEN, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D., F.A.A.O.O.*

ORTHOPAEDIC SURGERY
WALLACE E. LOWRY, JR., M.D.*
JAMES A. DOTSON, M.D.*

PATHOLOGY
MARY G. BANKHEAD, M.D.*

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D., F.A.A.P.*
MASON P. GILFOIL, M.D.

UROLOGY
WILLIAM V. HALL, M.D., D.A.B.U., F.A.C.S.*

EXECUTIVE DIRECTOR
DON L. BOWEN, M.G.M.A.

*DIPLOMATE OF THE AMERICAN BOARD

TRAVIS CLINIC FOUNDATION AND TRAVIS CLINIC ASSOCIATION

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D., Emeritus
Ken E. Kuykendall, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
Mary A. Bone, M.D.
J. A. Armstrong, M.D.
D. B. Turner, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Dermatology:
T. S. Arrington, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

Podiatry:
Daniel H. Phelps, D.P.M.

Psychology:
Charles T. Fries, Ed.D.

Business Manager:
Gerald L. Burks

We have your best interest at heart.

Give Heart Fund
American Heart Association

Texas Physicians' Directory

RECTORY RATES & DATA: Space is available to TMA members at $12.50 per column inch per month and listings must n for a minimum of six months. A discount of 5% is owed for six months' advance payment. Section headings e limited to those specialties designated by the American edical Association. A list of these specialties is available on request. New listings, changes, or cancellations should sent to Advertising Manager, TEXAS MEDICINE, 1801 rth Lamar Blvd., Austin, Texas 78701. Deadline is the 5th the month preceding publication month.

inics

HE FORT WORTH CLINIC
21 West Lancaster Avenue, Fort Worth, Texas 76102
lephone 817 336-7191

TERNAL MEDICINE
ndra J. Belfi, M.D.
n M. Church, M.D.
omas J. Coleman, M.D.
bert R. Dickey, M.D.
d E. Garrison, Jr., M.D.
tell K. Holsapple, M.D.
n E. Johnson, Jr., M.D.
M. (Jack) Phillips, M.D.

GENERAL SURGERY
John H. Sewell, M.D.
Robert L. Sewell, M.D.

ORTHOPEDIC SURGERY
Thomas E. Rapp, M.D.

CONSULTANTS IN RADIOLOGY
Victor E. McCall, M.D.
Dixon Presnall, M.D.
Harry H. Whipp, M.D.

FTH AVENUE CLINIC
0 Fifth Avenue, Fort Worth, Texas

EDICINE
lney E. Stout, M.D.
nk L. Bynum, M.D.
Etier, Jr., M.D.

NERAL PRACTICE
nald S. Gibbs, M.D.

DIOLOGY
o H. Grunow, M.D.

EDICAL ASSOCIATES OF CORPUS CHRISTI, P.A.
33 South Brownlee, Corpus Christi, Texas 78404
lephone 883-7411

MILY MEDICINE
vis B. Phelps, M.D., F.A.A.F.P.
D. Harvey, M.D., A.B.F.P.
R. Rose, M.D., A.B.F.P.
L. Vernor, M.D.
derick S. Maurer, M.D.

THOPEDIC SURGERY
M. Yanez, M.D., F.A.C.S.

INTERNAL MEDICINE
G. A. Reeves, M.D.
Pruett Moore, Jr., M.D.
Mark G. Strauss, M.D.

EXECUTIVE DIRECTOR
Gene Hybner

DIRECTOR OF NURSES
Pat Parker, R.N.

Remind your colleagues of your specialty and office location.
Purchase a listing in the "Texas Physicians' Directory."

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

INTERNAL MEDICINE
C. M. Maruri, M.D.
A. J. Nodarse, M.D.

GENERAL SURGERY
B. W. Hink, M.D., F.A.C.S.

FAMILY MEDICINE
J. H. Cochrane, Jr., M.D., F.A.A.F.P.
J. W. O'Bryant, M.D.
A. A. Piske, M.D.

FAMILY MEDICINE AND GENERAL SURGERY
Salvador Faus, M.D.

CLINIC MANAGER
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

MALONE AND HOGAN CLINIC
1501 West 11th Place, Big Spring, Texas 79720, Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.
W. B. Allensworth, M.D.

GENERAL SURGERY
C. B. Marcum, M.D., F.A.C.S.
J. E. Mathews, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
C. T. Moore, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
D. M. Logan, M.D.
V. T. Smith, M.D.

FAMILY PRACTICE
W. R. Strahan, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.
J. W. Kuykendall, M.D.

PEDIATRICS
J. M. Woodall, M.D.
B. R. Owen, M.D., F.A.A.P.

RADIOLOGY & NUCLEAR MEDICINE
Buerk Williams, M.D.
A. P. Goswami, M.D.

UROLOGY
J. W. Cowan, M.D.

PODIATRY
Bradford Glass, D.P.M.

PATHOLOGY
B. A. Campomanes, M.D.

CONSULTANT IN ELECTROENCEPHALOGRAPHY
M. L. Proler, M.D.

ADMINISTRATION
R. L. Heith, Administrator

RUGELEY AND BLASINGAME CLINIC
2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Richard R. Raphael

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.
W. C. Yankowsky, M.D.

UROLOGY
H. Z. Fretz, M.D.

DERMATOLOGY
T. S. Arrington, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

ANESTHESIOLOGY
C. G. Spears, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77030
Telephone 713 797-9191

Internal Medicine and Diagnosis

ALLERGY
Arthur T. Pedersen, M.D.

CARDIOVASCULAR DISEASE
Thomas J. Fatherree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.
Boguslaw Godlewski, M.D.
Matthew T. Monroe, M.D.

DERMATOLOGY
Samuel F. Bean, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Raymond L. Gregory, M.D.
R. Frederick Gregory, M.D.
Thomas J. Hanson, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.
Michael Gagliardi, M.D.
James K. Gordon, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George T. Conklin, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
George Burnazian, M.D.
Benjamin L. Portnoy, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.
James V. Ryan, M.D.

NEPHROLOGY
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

NEUROLOGY
Donald J. Russell, M.D.
George Isaacs, M.D.
Ernesto Infante, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.
Harry R. Price, M.D.
Edward L. Middleman, M.D.
Martin J. Hrgovic, M.D.

PATHOLOGY
Paul B. Radelat, M.D.
Ashok M. Balsaver, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.
Martin L. Kaplan, M.D.
Louis C. Waddell, Jr., M.D.

RADIOLOGY
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.
Joe B. Wilson, M.D.
Howard J. Pollock, M.D.

NUCLEAR MEDICINE
Donald A. Podoloff, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
Robert B. Hall,
Administrator
Richard V. Vanderslice,
Assistant Administrator

HOUSTON HEADACHE CLINIC
Park Plaza Professional Building
1213 Hermann Drive, Suite 855
Houston, Texas 77004
(713) 528-1916

Neurology
Ninan T. Mathew, M.D., F.R.C.P.(C)

Allergy

HOUSTON ALLERGY CLINIC
Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Richard H. Jackson, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Warren J. Raymer, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
D. W. Waddell, M.D., F.A.A.C.I.A.
Ramon Garrido, M.D., F.A.C.A., F.A.A.C.I.A.*
(Certified American Board of Pediatrics)
*Diplomate American Board of Allergy & Immunology

Suite 444, Hermann Professional Building
6410 Fannin St., Houston, Texas 77030, 713 797-0900

PETER B. KAMIN, M.D., P.A.
Certified American Boards of Pediatrics and Allergy
Diplomate American Board of Allergy and Immunology
Allergy and Immunology

Suite 601, Oak Hills Medical Building
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Phone 512 696-4405 or 227-6331

TMA Group Insurance Plans
. . . Another service of your association

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

JOHN P. McGOVERN, M.D.
Director-Consultant

THEODORE J. HAYWOOD, M.D.
ORVILLE C. THOMAS, M.D.
JOSEPH T. QUENG, M.D.
LAWRENCE G. THORNE, M.D.
K. VENUGOPALAN, M.D.
ROBERT E. SMITH, M.D.
JAMES A. AYERS, M.D.
EUNICE W. CHOU, M.D.
ALBERT LEHMANN, M.D.
GERALD T. MACHINSKI, M.D.

Research Associates
MICHAEL H. SMOLENSKY, Ph.D.
ALAIN REINBERG, M.D., Ph.D.
CALVIN J. McLERRAN, Ph.D.
MICHAEL A. McCORMICK, Ph.D.
GLENNA M. KYLE, M.S.
ITING MAY LU, M.S.

Consultants

EVAN M. HERSH, M.D.
JUDITH H. MARSTON, Ph.D.
Immunology

JAMES A. KNIGHT, M.D.
Psychiatry

HERBERT C. McKEE, Ph.D.
RICHARD K. SEVERS, Ph.D.
Air Pollution

CAROLYN S. LEACH, Ph.D.
Clinical Laboratories

JOHN A. THOMAS, Ph.D.
Clinical Pharmacology

THOMAS D. DOWNS, Ph.D.
Biometrics

WARREN E. SCHALLER, H.S.D.
Allied Health Sciences

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025, 713 661-1444

CORPUS CHRISTI ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology

2530 Morgan, Corpus Christi, Texas, 882-3487

STUART ALAN MASON, M.D., P.A.
Fellow American Association for Clinical Immunology and Allergy
Fellow of the American College of Allergists
Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

ALLERGY AND IMMUNOLOGY
Joseph T. Sams, M.D., P.A. or C. David Meadows, M.D., P.A.
Diplomates of the American Board of Allergy and Immunology

900 W. Randol Mill Rd., Suite 215, Arlington, Texas 76012, 817 277-116

CHARLES A. RUSH, JR., M.D.
Diplomate/American Board of Allergy & Immunology
Fellow, A.A.A., A.C.A., A.A.C.I.A.

Northeast Medical Clinic Association
7601 Glenview Drive
Fort Worth, Texas 76118

FREDERICK W. GROVER, M.D. & ASSOCIATES
Diplomate of the American Board of Allergy and Immunology
Allergy and Immunology
Children and Adults
6114 Sherry Lane, Preston Center, Dallas, Texas 75225
Telephone: (214) 363-7790

MEMORIAL LIBRARY
TEXAS MEDICAL ASSOCIATION
1801 North Lamar Blvd., Austin, Texas 78701, 512 477-6704

A clinical library designed to assist the practicing physician

50,000 bound volumes • extensive reprint and periodical collection
• 400 lay and professional films • pathological slide sets
• cassette and reel-to-reel tapes from AMA, Audio Digest
• MEDLINE computer data service

. . . Another service of your associati

Colon & Rectal Surgery

ALVIN BALDWIN, JR., M.D.
Diplomate American Board of Colon and Rectal Surgery

R. D. DIGNAN, M.D.
Diplomate American Board of Surgery
Diplomate American Board of Colon and Rectal Surgery

Suite 1209 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246
Telephone 824-2573

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery

2715 Fannin Street, Houston, Texas

C.D.L. CROMAR, M.D., M.S., F.R.C.S.E., F.R.C.S.C.
Surgery of the Rectum and Colon

Suite 8, 3337 Plainview, Pasadena, Texas 77504

SOMMAI SEHAPAYAK, M.D.
Diplomate American Board of Colon and Rectal Surgery
Diseases and Surgery of the Colon and Rectum and Fiber-optic Colonoscopy

Medical Tower, Suite 210, 1550 West Rosedale,
Fort Worth, Texas 76104, 817-338-4501 (24 hours)

SUVID PITA, M.D.
Colon and Rectal Surgery
Colonoscopy

Barnett Tower, Baylor Medical Plaza
3600 Gaston Ave, Suite 411
Dallas, Texas 75246
Telephone 214 821-4300

MANUEL G. LAGON, M.D., F.A.C.S.
Diplomate American Board of Colon and Rectal Surgery

FORT WORTH COLON AND RECTAL CLINIC, P.A.
Colonoscopy, Colon and Rectal Surgery

909 Eighth Avenue, Fort Worth, Texas 76104; Telephone 332-1371

Dermatology

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy

1400 Eighth Street, Wichita Falls, Texas

DRS. PIPKIN AND RESSMANN
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies

714 Medical Arts Bldg., San Antonio, Texas 78205

J. GILMORE BRAU, M.D.
Dermatology and Syphilology
X-Ray and Radium Therapy

Hours 9 to 1—3 to 5
3817 Brown Street, Dallas, Texas

JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
A Professional Association
Dermatology, Syphilology, and Cancer of the Skin

3801 19th St., Suite 500, Lubbock, Texas 79410

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies

7777 Forest Lane, Suite 214, Dallas, Texas 75230; Phone 661-7460

GERALD A. CASID, M.D., P.A.
Skin Diseases—Skin Tumors
Hair Transplantation, Dermabrasion, Chemical Peels

333 N. Shiloh Rd., Garland, Texas 75042
Phone 214 272-5451

DAVID S. ALKEK, M.D. AND ASSOCIATES
LON E. ROGERS, M.D.
Dermatology and Cancer of the Skin
Dermabrasion and Chemical Peel

8226 Douglas Avenue, Suite 755
Dallas, Texas 75225
Ph: 214 691-6691

Medical City
7777 Forest Lane
Dallas, Texas 75230

WILLIS I. COTTEL, M.D.
Practice Limited to Skin Cancer
Moh's Chemosurgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960

Endocrinology

ENDOCRINE ASSOCIATES OF DALLAS, P.A.
STANLEY FELD, M.D.
RICHARD SACHSON, M.D.
Practice Limited to Endocrinology

Douglas Plaza Bldg., Telephone: 363-5535
8226 Douglas Avenue, Dallas, Texas 75225

Family & General Practice

GLENN C. COATES, M.D.*
GENE V. HAVERLAH, M.D.
SAM A. NIXON, M.D.*
EUGENE M. TOKAR, D.D.S.
1303 Hospital Blvd., Floresville, Texas 78114, 512 393-2527
*Diplomate American Board of Family Practice

SAMUEL SILVA, M.D.
Hair Transplantation

4759 South Freeway, Fort Worth, Texas, 817 923-7374

TMA Members' Retirement Trust (Keogh)

. . . Another service of your association

Gastroenterology

CECIL O. PATTERSON, M.D., F.A.C.P.
Gastroenterology, Gastroscopy, Esophagoscopy
1414 Medical Arts Building, Dallas, Texas, 742-6141-44

MILFORD O. ROUSE, M.D., F.A.C.P.
Consultations in hospitals only

DRS. BAILEY, DOUGLAS AND DEVANEY ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
George T. DeVaney, M.D.
Nisar Ahmed, M.D.

KALMAN NARAYAN, M.D.
Diplomate American Board of Internal Medicine
Gastroenterology, Gastroscopy, Colonoscopy, Polypectomy, E.R.C.P.

909 8th Ave., Suite 7, Ft. Worth, Texas 76104, 817 336-9055

General Surgery

BURT B. SMITH, M.D., F.A.C.S.
Surgery
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery

728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery

1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Thoracic Surgery
Vascular, General and Thoracic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue,
Dallas, Texas 75246, 821-2356

ROBERT J. TURNER, III, M.D., F.A.C.S.
Diplomate American Board of Surgery
General and Peripheral Vascular Surgery

The Saint Joseph Professional Building
1400 South Main Street, Suite 104
Fort Worth, Texas 76104, 335-8311

ROBERT M. STECKLER, M.D.
Diplomate American Board of Surgery
Head and Neck Surgery, Surgery, and Surgical Oncology

Baylor Medical Plaza, Suite 1008, 3600 Gaston Avenue,
Dallas, Texas 75246, 214 827-9880

ROBERT DAVIS, M.D., M.B., B.Ch. (Rand), F.R.C.S. (Edin.)
General Surgery
430 Park Plaza Professional Building, 1213 Hermann Drive,
Houston, Texas 77004; 713 528-0597
By Appointment

Hand Surgery

L. LEE LANKFORD, M.D.
Diplomate American Board of Orthopaedic Surgery
PETER R. CARTER, M.D.
Hand Surgery and Upper Extremity Reconstructive Surgery
Baylor Medical Plaza, Barnett Tower, Suite 802, 3600 Gaston Avenue
Dallas, Texas 75246, 214 823-5351

Neurological Surgery

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery

Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Morris Sanders, M.D.
Phillip E. Williams, Jr., M.D.
Ira C. Denton, Jr., M.D.
W. Robert Hudgins, M.D.
Jack Woolf, M.D., Consultant

5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620,
Dallas, Texas 75235; 214 637-0420

8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905,
Dallas, Texas 75231; 214 369-7596

3600 Gaston Avenue, Barnett Tower, Baylor Medical Plaza, Suite 310,
Dallas, Texas 75246; 214 826-1976

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
THOMAS R. BOULTER, M.D.
Neurological Surgery

8210 Walnut Hill Lane, Suite 805, Dallas, Texas 75231, 363-8524

RONALD SMITH, M.D.
Neurological Surgery

901 South Lake, Fort Worth, Texas, 336-0551

CHERRY-LONG NEUROSURGERY ASSOCIATION
GLENN R. CHERRY, M.D., D.A.B.N.S., F.A.C.S.
R. GORDON LONG, M.D., D.A.B.N.S., F.A.C.S.
BENNIE B. SCOTT, M.D.
Neurological Surgery
Baylor Medical Plaza — 605 Barnett Tower
3600 Gaston Avenue — Dallas, Texas 75246
Telephone 214 826-7060

EL PASO NEUROLOGICAL INSTITUTE
Professional Association
Neurology, Neurosurgery, Electroencephalography
Neuro-Radiology, Physiotherapy

William J. Nelson, M.D., Neurosurgery
John T. O'Neal, M.D., Neurosurgery
Robert D. Schneider, M.D., Neurology and Electroencephalography
Steven K. Crouse, M.D., Neurology and Electroencephalography

Medical Plaza Bldg., Suite 307
El Paso Medical Center
1501 Arizona Avenue, El Paso, Texas 79902
Telephone 915 532-8901

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D., F.A.C.S.
E. FLOYD ROBINSON, M.D.
Neurological Surgery

2210 Maroneal, Houston, Texas 77025, 523-3684

TEXAS NEUROLOGICAL INSTITUTE AT DALLAS, P.A.

Neurological Surgery
James E. Bland, M.D.
Martin L. Lazar, M.D.

Medical Neurology, Electroencephalography and Electromyography
Ralph G. Greenlee, Jr., M.D.
Allan L. Naarden, M.D.
Richard R. North, M.D.
William S. Woodfin, M.D.

Neuro-Ophthalmology
Peter R. Bringewald, M.D.

Director, Pain Relief Center and Neuroanesthesiologist
P. Prithvi Raj, M.D.

Consultant in Speech
Josephine Simonson, M.A.

7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

Nuclear Medicine

NUCLEAR MEDICINE LABORATORIES OF TEXAS

Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., M.D., F.A.C.N.M.
Director - 713 790-0540
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, JR., M.D., F.A.C.N.M.

Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540

Diplomate American Board of Nuclear Medicine

Occupational Medicine

Eric G. Comstock, M.D.

Diplomate American Board of Medical Toxicology

OCCUPATIONAL TOXICOLOGY

1802 Medical Towers, Houston, Texas 77030; 713 790-0160

Ophthalmology

HOUSTON EYE ASSOCIATES

1100 Hermann Prof. Bldg., Houston, Texas 77030, 713 790-1100

Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D., F.A.C.S.
Malcolm L. Mazow, M.D., F.A.C.S.
Robert H. Stewart, M.D., F.A.C.S.
Robert B. Wilkins, M.D., F.A.C.S.
Jeffrey D. Lanier, M.D., F.A.C.S.
Michael A. Bloome, M.D., F.A.C.S.
Paul C. Salmonsen, M.D.
Richard L. Kimbrough, M.D.

DRS. ALPAR, TAYLOR, HOWELL, CURRIE & WEINBERGER

Ophthalmology

John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Hugh B. Currie, M.D.
Bruce L. Weinberger, M.D.
Diplomates of the American Board of Ophthalmology
15 Medical Drive, Amarillo, Texas

TMA Physicians' Placement Service

. . . Another service of your association

TEXAS RETINA ASSOCIATES

Albert Valser, M.D.
William B. Snyder, M.D.
William L. Hutton, M.D.

Diseases and Surgery of the Retina and Vitreous

318 Medical Arts Building, Dallas, Texas, 748-0958

BRUCE C. TAYLOR, M.D.
RICHARD L. WINSLOW, M.D.

Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E., Dallas, Texas 75204
214 521-1153

McPHERSON ASSOCIATES

Diseases and Surgery of the Retina and Vitreous

Alice R. McPherson, M.D.
Robert A. Moura, M.D.
Arthur W. Willis, M.D.
Robert W. Butner, M.D.

6436 Fannin, Suite 800, Houston, Texas 77030
713 797-1903

EYE ASSOCIATES

Diseases and Surgery of the Eye

Charles A. Sargent, M.D.
Alan C. Baum, M.D.

3838 Hillcroft, #415, Houston, Texas 77027, 713 781-2882

CORPUS CHRISTI EYE ASSOCIATES

J. Gordon Bryson, M.D.
C. A. Struve, M.D.
John W. Lewis, M.D.

3166 Reid Drive, Corpus Christi, Texas 78404, Phone 853-7319

EYE CENTER OF AUSTIN

3913 Medical Parkway
Austin, Texas 78756; 512 451-8484

Edward J. Petrus, M.D.
Richard E. Nieman, M.D.

JOHN Y. HARPER, JR., M.D., P.A.

Diseases & Surgery of the Vitreous and Retina

601 Madison Square Medical Building
311 Camden Street, San Antonio, Texas 78212
512 226-1812

PETER R. BRINGEWALD, M.D.

Neuro-Ophthalmology

Texas Neurological Institute at Dallas, P.A.
7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

By appointment only.

COASTAL BEND EYE ASSOCIATES

Jack A. Sahadi, M.D.

712 Booty Street, Corpus Christi, Texas 78404
Telephone 512 888-4288

Present your ideas in Texas Medicine

For details on submitting manuscripts,
send for a copy of "Information for Authors."
Mrs. Marilyn Baker, Executive Editor
TEXAS MEDICINE
1801 North Lamar Blvd.
Austin, Texas 78701

Orthopedic Surgery

H. H. Beckering, M.D.
L. Ray Lawson, M.D.
George Truett James, M.D.
Robert D. Vandermeer, M.D.
Wynne M. Snoots, M.D.
R. Stephen Curtis, M.D.

W. B. CARRELL MEMORIAL CLINIC
A Professional Association
2828 Lemmon Ave., Dallas, Texas

FORT WORTH BONE & JOINT CLINIC
918 8th Avenue, Fort Worth, Texas

Louis J. Levy, M.D.
Henry C. McDonald, Jr., M.D.
Fred W. Sanders, M.D.
James M. Beckley, M.D.
Joseph H. Gaines, M.D.

Ralph E. Donnell, M.D.
F. Carlton Hodges, M.D.
J. Price Brock, Jr., M.D.

ORTHOPEDIC ASSOCIATES
Diplomates American Board of Orthopedic Surgery

1133 N. 19th St., Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC
Joseph Barnhart, M.D.
Donald T. Lazarz, M.D.
Lee C. Detenbeck, M.D.
Thomas S. Padgett, M.D.

5620 Greenbriar, Houston, Texas 77005, 526-6262 and
Parkway Towers Professional Building, 150 West Parker Road,
Houston, Texas 77022, 691-3905

LUBBOCK ORTHOPEDIC SURGERY CLINIC
Orthopedic Surgery—Surgery of the Hand
Royce C. Lewis, Jr., M.D.
Kenneth C. Scholz, D.D.S., M.D.
W. Ted Sisco, M.D., P.A.
G. S. Gill, M.D.

3702 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

THE ORTHOPEDIC GROUP OF RICHARDSON
Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.

Orthopedic Surgery

812 S. Central Expressway, Richardson, Texas 75080, 231-6396

THE ARLINGTON ORTHOPEDIC GROUP
H. W. Bendel, Jr., M.D.
E. E. Rising, Jr., M.D.*
C. Poindexter, M.D.
C. R. Vavrin, M.D.
Frank R. Vincenti, M.D.
Diplomates American Board of Orthopaedic Surgery
*Emphasizing Surgery of the Hand

801 West Randol Mill Road, Arlington, Texas 76012, 817 261-8284

LOUIS W. BRECK, M.D., P.A., F.A.C.S.
Diplomate American Board of Orthopaedic Surgery
Practice Limited to Orthopaedic Surgery

1209 North Kansas, El Paso 79902
Telephone 915 544-3831

THURSTON DEAN, M.D.
Diplomate American Board of Orthopedic Surgery

509 N. Garfield Street
Midland, Texas 79701
Telephone: 915 682-0433 or 682-0163

ADDRESS CHANGE? Avoid missing or delayed mail. Send old and new address to Membership Department, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701.

ORTHOPEDIC ASSOCIATES OF DALLAS
F. Leon Ware, M.D.
Dan R. Sutherland, M.D.
John B. Gunn, M.D.
Richard A. Shirley, M.D.
R. Dan Loyd, M.D.

Orthopedic Surgery

3600 Gaston Avenue, Suite 303
Dallas, Texas 75246; 214 823-7090

Otolaryngology

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.
Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

Otology

DANIEL McNAMARA MARTINEZ, M.D., F.A.C.S.
Otology and Otoneurology

8210 Walnut Hill Lane, Presbyterian Professional Building,
Suite 400, Dallas, Texas 75231; 214 691-7331

DALLAS HEARING, BALANCE AND OCULAR PULSE LABORATORY
Audiology—Vestibulometry—Non-invasive Carotid and Vertebral Circulation Studies

402 Presbyterian Professional Building, 8210 Walnut Hill Lane,
Dallas, Texas 75231; 214 691-7367

Pathology

FORT WORTH MEDICAL LABORATORIES
John J. Andujar, M.D.
Dorothy Patras, M.D.

1400 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

BROWN & ASSOCIATES MEDICAL LABORATORIES
Clinical Pathology, Hematology, Surgical Pathology, Exfoliative Cytology and Electrophoresis
Wilson G. Brown, M.D.
George V. Miller, M.D.
Walter G. Olin, Jr., M.D.
John R. Thomas, M.D.
S. Joseph Skinner, M.D.
Joe B. Haden, M.D.
Enrique van Santen, M.D.
Elaine V. Shalek, M.D.
Robert H. McNeely, M.D.
Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas 77030
220 Park Plaza Prof. Bldg., Houston, Texas 77004
Telephone 527-5230
Mailing Containers on Request—Office Pickup Service in Houston

PRUITT MEDICAL LABORATORIES
Jack Pruitt, M.D.
E. Hernandez, M.D.
Diplomates, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology,
Medicolegal Consultation
P. O. Box 160, Lufkin, Texas 75901, 634-4451

TMA International Travel Program
. . . Another service of your association

/ACO CLINICAL PATHOLOGY LABORATORY
P. Wittstruck, M.D., F.C.A.P.
alter Krohn, M.D., F.C.A.P.
)bert Wayne Walter, M.D., F.A.C.P.
inical Pathology
rgical Pathology
foliative Cytology
edicolegal Consultation
alling Containers on Request
12 Washington Ave., P.O. Box 3160, Waco, Texas 76707, 756-7226

. S. Wilkenfeld, M.D., Medical Laboratories, Inc.
. S. WILKENFELD, M.D. ENA E. MOCEGA, M.D.
iplomates of the American Board of Pathology
natomical Pathology, Clinical Pathology
xfoliative Cytology and Dermatopathology
150 Long Point Road, P.O. Box 55008
ouston, Texas 77055, 713 468-0738
alling Containers on Request—Office Pickup Service in Houston

RTHUR L. RAINES, M.D. AND ASSOCIATES
athologists
IPLOMATES, AMERICAN BOARD OF PATHOLOGY
linical Pathology — Surgical Pathology
cfoliative Cytology — Medicolegal Consultation
ospital and Clinic Laboratory Consultation
. O. Box 118, Cleburne, Texas 76031
17 645-9181, Ext. 360
AILING CONTAINERS ON REQUEST

IENRY B. OWENS, M.D., F.C.A.P.
iplomate American Board of Pathology
ytology and Tissue Pathology Only
01 E. Border St., Suite M, P. O. Box 1627
rlington, Texas 76010, 817 461-2771
lalling Containers on Request—Office Pickup Service in Arlington

hysical Medicine & Rehabilitation

EXAS REHABILITATION HOSPITAL OF GONZALES
VARM SPRINGS FOUNDATION, INC.
. O. BOX 58, GONZALES, TEXAS 78629
acilities for Physical Restoration
hysical Therapy, Occupation Therapy, Speech Therapy,
ecreational Therapy, School from first grade through twelfth grade
)AVID E. GUMPER, Administrator
ARRY E. BROWNE, M.D., Medical Director

ROBERTO G. ROLFINI, M.D.
iplomate American Board of Physical Medicine & Rehabilitation
Rehabilitation Medicine and Electromyography
02 Rosa Verde Tower, 343 W. Houston Street
an Antonio, Texas 78205, Telephone 226-2424

SHOAL CREEK REHABILITATION CENTER
3501 Mills Avenue, Austin, Texas 78703, 512 452-0361
Rodney J. Simonsen, M.D., Medical Director
Joe T. Powell, M.D., Associate Director
Comprehensive rehabilitation facilities for spinal cord injury, stroke, head injury, pain management, and related conditions

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D., F.A.C.S.
THOMAS M. BIGGS, M.D., F.A.C.S.
LAURENCE E. WOLF, M.D.
Diplomates American Board of Plastic Surgery
PLASTIC SURGERY
5419 Caroline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery
530 Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Cosmetic Surgery
612 Doctors Bldg., Fort Worth, Texas 336-0356

PLASTIC SURGERY ASSOCIATES
Simon Fredricks, M.D., F.A.C.S.
Charles W. Bailey, Jr., M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery
Jonathan J. Dora, M.D.
1103 Medical Towers, Houston, Texas 77025, 523-5575

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
Plastic & Reconstructive Surgery
Cosmetic Surgery
606 Medical Plaza Bldg., 800 Eighth Avenue, Fort Worth, Texas 76104, 335-4751

VALENTIN GRACIA, M.D., P.A., F.A.C.S., F.I.C.S., D.A.B.
Aesthetic Surgery—Burns
1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

FRANCIS A. MORRIS, JR., M.D.
Diplomate American Board of Plastic Surgery
Plastic Surgery
3100 Red River, Austin, Texas 78705; 512 476-9149

PATRICK H. BECKHAM, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery
1111 West 34th Street, Suite 207, Austin, Texas 78705, 459-3258

WILLIAM E. BARNES, M.D.
Diplomate American Board of Plastic Surgery
Cosmetic Surgery
Plastic & Reconstructive Surgery
1301 West 38th Street, Suite 608, Austin, Texas, 454-7659

JOHN E. CARTER, M.D., P.A.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Telephone: (Area Code 512) Office 696-2390 Medical Exchange 227-6331

JOSEPH C. FORD, M.D., P.A., F.A.C.S.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery
508 Madison Square Medical Building
311 Camden, San Antonio, Texas 78215, 224-5509

BROMLEY S. FREEMAN, M.D., F.A.C.S.
D. ROBERT WIEMER, M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery
Plastic & Reconstructive Surgery
7000 Fannin, Suite 1770, Houston, Texas 77025
713 795-5584

JACK L. CONLEE, M.D.
Diplomate American Board of Plastic Surgery
Plastic and Cosmetic Surgery

3318 S. Alameda, Suite 1, Corpus Christi, Texas, 855-7359

PLASTIC SURGERY ASSOCIATION
LEONARD KOCH, M.D.
Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410, 806 792-2313

ROBERT L. CLEMENT, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive Surgery

1111 West 34th Street, Suite 205, Austin, Texas 78705, 512 459-3101

STEPHEN C. LESAUVAGE, M.D.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1318 Clinic Drive, Tyler, Texas 75701; 214 593-8296

Psychiatry

Perry C. Talkington, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Larry R. Kimsey, M.D.
Charles M. Smith, M.D.
Gregory G. Dimijian, M.D.
Linda R. Hughes, M.D.
Roy H. Fanoni, M.D.
Byron Howard, M.D.
Larrie W. Arnold, M.D.
Madeline W. Harford, M.D.
John G. Looney, M.D.

Practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

ALAN B. BRINSMADE, M.D.
General Psychiatry
Specializing in Psychotic Illnesses-Acute and Chronic

Hermann Medical Center Professional Building
Houston, Texas 77025, 713 524-8496

PERRY C. TALKINGTON, M.D.
Psychiatry

4645 Samuell Blvd., Dallas, Texas 75228, 214 381-3849

Texas Continuing Education Directory
. . . Another service of your association

FABRE CLINIC

LOUIS F. FABRE, JR., M.D., Ph.D.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy
Children — Family — Alcoholism

Free of charge to patient MEDICATION CLINIC
FOR PATIENTS WITH ANXIETY OR DEPRESSION
IN CONJUNCTION WITH CNS RESEARCH WITH
PSYCHOPHARMACOLOGICAL COMPOUNDS

DAVID McLENDON, Ph.D.
Licensed Clinical Psychologist
Individual and Group Psychotherapy
Diagnostic Evaluations and Counseling

H. JOHN JACKSON, Ed.D.
Educational Psychologist
Administrative Consultation to School District
Program Organization Consultation
Individual Family Counseling

5503 Crawford Street, Houston, Texas 77004, 713 526-2328

HARRIS HAUSER, M.D. AND ASSOCIATES
Psychiatry

Frank H. Chesky, M.D.
Jose A. Gutierrez, M.D.
Harris M. Hauser, M.D.
Linda S. Blume, A.C.S.W.

7777 Southwest Freeway, Suite 1004, Houston, Texas 77074;
713 772-4600

1740 West 27th, Suite 315, Houston, Texas 77008; 713 772-4600

Psychiatry & Neurology

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., J. J. Leyva, M.D.
Department of Psychology
Allen Goss, Ph.D., Jim M. Phillips, Ph.D.
Practice Limited to Neurology and Psychiatry
Office Hours By Appointment
First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

STEPHEN WEISZ, M.D.
Practice Limited to Neurology and Psychiatry

1637 Medical Arts Bldg., Dallas, Texas 747-5183

THE FORT WORTH NEUROPSYCHIATRIC CENTER
*Herbert G. Rush, M.D.
A. Arauzo, M.D.
Sanford Lehrer, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

*Diplomate American Board of Psychiatry and Neurology

H. KORNBLIT, M.D.
Neurology—Headache Clinic

Memorial City Prof. Bldg. #176
902 Frostwood, Houston, Texas 77024

TMA Automobile Lease Program
. . . Another service of your association

HAUSER CLINIC

Psychiatry, Neurology, Electroencephalography and Electromyography

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
*H. James Stuart, M.D.
Javier A. Zapata, M.D.
*Susan B. Darsey, M.D.
*Harvey A. Rosenstock, M.D.

Section of Psychology
Ken R. Vincent, Ed.D.

Administrator
Richard J. Kurzenberger

Section of Neurology
*Gerald Ratinov, M.D.
*Robert M. Gordon, M.D.
*Ronald DeVere, M.D.

Section of Social Work
Pamela Plimmer, A.C.S.W.
Marguerite Papademitriou, A.C.S.W.
Margery Engel, M.S.S.W.
Jean Lerner, M.S.W.

808 Memorial Professional Building, Houston, Texas 77002
Telephone 713 224-5041

*Diplomate, American Board of Psychiatry and Neurology

MEMORIAL NEUROLOGICAL ASSOCIATION

Neurology, Electroencephalography, Electromyography and C. T. Scan

James L. Frey, M.D.
Harris M. Hauser, M.D., F.A.A.N.
Cheor J. Kim, M.D.
Lorenzo Lorente, M.D.

1740 West 27th, Suite 315, Houston, Texas 77008, 713 861-4516
7777 Southwest Fwy., Suite 1004, Houston, Texas 77074, 713 772-4600

HAUSER PSYCHIATRIC ASSOCIATES

Psychiatry and Neurology

*Ronald J. Hauser, M.D., F.A.P.A.

Individual and Group Therapy
Marital and Family Counseling

Laurence J. Gross, M.S.W., S.P.
Judy Kanas, M.S.W., S.P.

*Diplomate, American Board of Psychiatry and Neurology

9100 Westheimer, Suite 40
Houston, Texas 77063; 781-6742

Radiology

ROYAL WERTZ, M.D., F.A.C.R.

Practice Limited to Radiology

800 Rusk Street, Amarillo, Texas 79106, 373-8324

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D., D.A.B.R.

RADIOLOGY

109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

TMA Action/TMA Legislative Bulletin

. . . Another service of your association

KARL THORD DOCKRAY, M.D.

Diplomate, American Board of Nuclear Medicine
Diplomate, American Board of Radiology

Roentgenology, Nuclear Medicine, Xeromammography
Mobile Film Service for Area Nursing Homes

763-5774 Office 765-7701 Page 762-0471 Mobile
Lubbock, Texas

Rheumatology

DON E. CHEATUM, M.D., F.A.C.P.

Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204, 823-4151

ROY M. FLEISCHMANN, M.D.

Diplomate American Board of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

3707 Gaston Avenue, Suite 810, Dallas, Texas 75246; 827-0868

Thoracic Surgery

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.
Maruf A. Razzuk, M.D.

DRS. PAULSON, URSCHEL, RAZZUK AND ASSOCIATES

Thoracic and Cardiovascular Surgery

1201 Barnett Tower
3600 Gaston Avenue, Dallas, Texas 75246; 824-2503

JOHN L. KEE, JR., M.D.

Thoracic Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246; 826-5184

ALLAN L. GRAHAM, M.D., F.A.C.S.
KARAMAT U. CHOUDHRY, M.D., F.A.C.S.

Diplomates American Board of Surgery and Board of Thoracic Surgery

ROBERT W. MILEY, M.D.

Diplomate American Board of Surgery

Cardiac, Thoracic and Vascular Surgery Associates

800 Eighth Ave., Suite 626, Fort Worth, Texas 76104: 332-7878

HECTOR O. YANES, M.D., P.A., F.A.C.S., F.A.C.C.

Cardiac, Vascular and Thoracic Surgery

Diplomate American Board of Surgery and
American Board of Thoracic Surgery

432 Medical Plaza, 800 Eighth Ave.,
Fort Worth, Texas 76104, 332-1947

RICHARD E. WOOD, M.D.

Cardiac, Thoracic and Vascular Surgery

Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890

Hours By Appointment

Hugh E. Wilson, M.D. and Associates

HUGH E. WILSON, M.D.
CHARLES T. MEADOWS, M.D.

Thoracic and Cardiovascular Surgery

6161 Harry Hines Boulevard
Dallas, Texas 75235; 214 637-3470

Urology

JO C. ALEXANDER, M.D., FOSTER FUQUA, M.D.,
ELGIN W. WARE, JR., M.D., GEORGE E. HURT, JR., M.D.,
DONALD E. JOHNSON, M.D. & ASSOCIATES
L. MICHAEL GOLDSTEIN, M.D., THOMAS P. REILLY, M.D.

Urology

3600 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109

Dolphus E. Compere, M.D., F.A.C.S.
Grant F. Begley, M.D., F.A.C.S.
Hugh Lamensdorf, M.D., F.A.C.S.

Diplomates of American Board of Urology

H. M. GIBSON, JR., M.D., F.A.C.S.
ABEL GARDUNO, M.D.

Certified by American Board of Urology

Practice Limited to Urology

512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephone 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
NEWTON F. McDONALD, M.D.
JAMES E. MORNEAU, M.D.

Practice Limited to Urology

1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

DONALD J. NEESE, M.D.

Diplomate of American Board of Urology

Practice Limited to Urology

570 Park Plaza Professional Building
1213 Hermann Drive, Houston, Texas 77030; 713 524-3931
400 Medical Center Blvd., Suite 207, Webster, Texas 77598; 713 332-2466

EUGENE R. TODD, M.D., P.A.

Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3434 Swiss Ave., Suite 406, Dallas, Tex. 75204, 214 826-3500

DALLAS UROLOGY ASSOCIATES

David D. Reisman, M.D.
Donald J. Logan, M.D.
Allen S. Plotkin, M.D.
Donald L. McKay, M.D.

Practice Limited to Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

JOSEPH D. MITCHELL, JR., M.D.
TROY W. SCOTT, M.D.

Urology

Barnett Tower, Suite 906, Baylor Medical Plaza,
3600 Gaston Avenue, Dallas, Texas 75246

"Every man owes some of his time to the upbuilding of his profession"

—Theodore Roosevelt

Take an active role in TMA and your county society.

No one wakes up thinking, "Today I'm going to abuse my child."

Abuse is not something we think about, it's something we do.

Last year in America, an estimated one million children suffered from abuse and neglect, and at least 2,000 of them died needless, painful deaths.

The fact is, child abuse is a major epidemic in this country.

The solution? Part of it lies in your hands. With enough volunteers, local child abuse prevention programs could be formed to aid parents and children in their own communities. With your help, eighty percent of all abusers could be helped. Please. Write for more information on child abuse and what you can do.

What will you do today that's more important?

A Public Service of This Magazine & The Advertising Council

Ad Council

We need your help. Write:

National Committee for Prevention of Child Abuse, Box 2866, Chicago, Illinois 60690

Classified Advertising

Physicians Wanted

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from the big city problems. Call collect Dr. David M. Pogue, at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIAN AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6383.

PSYCHIATRIST, board certified or eligible needed for modern forensic psychiatry program. Texas license required. Salary $34,000+. Immediate openings. Call or write: Robert B. Shelton, M.D., Superintendent, Rusk State Hospital, P. O. Box 318, Rusk, Texas 75785; 214-683-5481.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic; adjacent to 36 bed hospital, recently remodeled. Salary $40-48,000 per year. Partnership available after trial period. Contact Willis G. Youens, Jr., M.D., 105 N. Grohmann, Weimar, Texas 78962; 713-725-8545.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

EMERGENCY DEPARTMENT GROUP, HOUSTON AREA, EXPANDING—choice of salary or fee-for-service with guarantee—malpractice paid—Call 713-861-7942 or write Greater Houston Emergency Physicians Association, 625 West 19th, Houston, Texas 77008.

FAMILY PRACTICE—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas 512-672-2811.

FAMILY PRACTITIONER WANTED to join two established family practitioners in Trinity, Texas. Former partner is leaving November 1976 for residency. A large ready made practice is available now. You are invited to investigate clinic and hospital facility, compatibility, economic and environment of rural practice in an outstanding recreational area that includes 2,000,000 acres of East Texas forest, 90,000 acre Lake Livingston, various golf courses, marinas, and country club developments. All guarantees, etc. are negotiable. Bring your wife. Sam R. Barnes, M.D. and J. Richard Cook, M.D., P.O. Box 672, Trinlty, Texas 75862.

FAMILY PRACTICE, GENERAL PRACTICE—Wanted immediately to join physician staff in rural community one-hour from Dallas-Fort Worth area. Extremely active practice with good benefits and an opportunity to enter into the corporation. Practice is with physicians clinic, 26-bed hospital, and 42-bed nursing home within the same building complex. Excellent arrangement for family practice. For further information contact Roger E. Marks, M.D., 817-897-2215 or 817-897-4436; Glen Rose, Texas.

PHYSICIAN WANTED: FAMILY CARE AND CHRONIC. Hospital facilities available ten miles. Clinic space available downtown Kemp. Pharmacy available. 45 miles southeast Dallas. Close to Cedar Creek Lake, fastest growing recreational-retirement area in Texas. Projected 100,000 population by 1980 in area. Country club, golf course, three miles. Excellent opportunity. Please reply to Edmund Horton, Ph., P.O. Box 449, Kemp, Texas 75143; phone 214-498-2011.

WANTED: FAMILY PRACTITIONER TO JOIN three man group. East Central Texas. New joint commission approved 30 bed hospital. Airport. New junior-senior high complex. Railroad division point. Small industry. Primary income ranching. Three fishing lakes. Deer, quail, dove hunting. Country club. No initial investment necessary. Contact Drs. Gage, Cox or Halbert, 315 Main Street, Teague, Texas 75860, 817-739-2561.

GENERAL INTERNIST AND FAMILY PRACTITIONER NEEDED to join nine man group in Clifton, Texas. Located in the heart of Texas, 30 miles NW of Waco; 15 miles from Lake Whitney. Good fishing; excellent hunting; new modern golf course. Excellent schools and churches in a growing progressive community and directly associated with a 75 bed, Hill Burton hospital which is fully accredited by the joint commission. Terms open at first with partnership in future. Please contact V. D. Goodall, M.D., Clifton Medical & Surgical Clinic Association, Clifton, Texas 76634. Telephone 817-675-8621 or 675-3113.

FAMILY PRACTITIONER: Psychiatric Clinic, seeking to expand medical services in the practice, has fully furnished facilities, including office & staff, for family physician. Choice location, close to four hospitals. Apply D. McCann, 2616 N. Oregon, El Paso, Texas 79902. 913-532-5232.

PUBLIC HEALTH DIRECTOR: The City of Austin, Texas, is accepting applications for the position of Director, Austin-Travis County Health Department. Full medical and administrative direction of local public health activities in a $4 million department of the City. Must be an MD with administrative experience; Texas license and MPH preferred. Salary starts at $35,000+, depending upon qualifications. Send resume to: Dan H. Davidson, City Manager, P.O. Box 1088, Austin, Texas 78767; 512-477-6511. Equal employment opportunity.

PHYSICIAN WANTED TO JOIN three-man group; two GP's, general surgeon (all Board). Practice in Hearne, Texas, population 5,000; drawing area 12,000+. Contact Dr. Ken Kennamer, Hearne, Texas; 713-279-3451 or 713-279-3100.

GENERAL PRACTITIONER NEEDED: To work with general surgeon doing GP work. Excellent opportunity for a doctor desiring family practice work. May start with salary of $45,000 per year negotiable. City has population of 9,000 with trade area of 25,000 to 30,000. Contact Chris S. Cruzcosa, M.D., 300 S. 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

INTERNIST AND GP/FP—Pine hills of East Texas. Thriving city of 65,000. Extraordinary cultural and recreational activities. Medical center of East Texas. Nine man group, 3 GP, 3 IM, 3 surgeons. Please contact Robert Felix, Administrator, Medical and Surgical Clinic, Box 6026, Tyler, Texas 75701. Phone 214-593-1721.

PHYSICIANS WANTED—Growing hospital in progressive East Texas town near metroplex needs ambitious physicians to join staff. Write Paul Bennet, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75647.

WANTED: Middle aged, perhaps older, well-trained and experienced internist or family practitioner. Light hours, easy responsibility backed by eight certified specialists staffing a very modern physician-controlled JCAH surgical and medical specialty hospital that adjoins offices. New 150 bed JCAH general hospital minutes away. Excellent southwestern climate; superior, unhurried lifestyle in wealthy 23,000 population city in center of large prosperous trade territory with two major medical centers immediately available. Above average earning potential. Guarantee negotiable with hospital furnishing office and complete ancillary services, both professional and business. This is for a competent man tired of the rat-race. He will practice better medicine for an appreciative clientele; his living conditions will be improved and less costly than in a large city. He will be only three or four minutes from work, shopping centers, golf course or airport. Hence an opportunity worth exploration. Contact E. O. Nichols, Jr., M.D., E. O. Nichols Hospital, Inc., Plainview, Texas 79072; 806-296-7425.

PHYSICIANS: You can find the perfect practice opportunity through Medenco Hospitals, Inc. A variety of settings from rural to metropolitan plus an attractive financial package are available with Medenco. Contact: Physician Relations, Medenco Hospitals, Inc., P. O. Box 3448, Houston, Texas 77001; toll free in Texas 800-392-6467.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $10.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

INDUSTRIAL PHYSICIAN TO JOIN multispecialty group as an addition to a large industrial department. Some surgical training desired; family practice boards acceptable. Work consists of pre-employment physicals, industrial injuries, and family practice. Salary and partnership negotiable and competitive. Keogh plan available. Adequate time off. Modern clinic facilities. Growing town of 125,000. Send curriculum vitae and references to Harry Ledbetter, M.D., 1518 Tenth Street, Wichita Falls, Texas 76301.

PATHOLOGIST—AP&CP CERTIFIED with two to three years experience to join pathologists' group in private practice in Houston, Texas. Special interest in bacteriology and clinical chemistry. Send curriculum vitae and recent photograph to Ad-717, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

TEXAS, NORTHEAST: Emergency physicians. Immediate openings available in established ACEP oriented group. Positions in several communities available. Prefer career-oriented emergency MDs. Additional training and/or experience required. Flexible schedule, fee-for-service with guarantee and usual fringes including malpractice insurance. Write: Emergency Medicine Consultants, 3600 Gaston Avenue, Dallas, Texas 75246, or call 214-823-6850.

PRIVATE PRACTICE OPPORTUNITY with guaranteed success now available in a modern 25 bed, JCAH-approved private hospital and a new four-doctor clinic; located in the heart of the Gulf Coast industrial center, twenty minutes from both downtown Houston, Texas, and Space Craft Center; clinic furnishes all overhead including rent, supplies and personnel; to insure success, a guarantee of $3,000 per month for six months is offered; earnings limited only by personal desire as you maintain a private fee-for-service practice. For details, contact Dr. Floyd D. Pendergrass, FAAMA, FRSH, Executive Director, Deaton Hospital Inc., 208 North Main Street, Galena Park, Texas 77547. Phone or wire collect 713-672-6311.

WANTED—GENERAL SURGEON to join established surgical practice in small city in the East Texas area. Send curriculum vitae to Athens Surgical Clinic, P. O. Box 1490, Athens, Texas 75751; telephone 214-675-5781.

OB/GYN man to join multi-specialty group of six. Salary first year $40,000 with a bonus of $5,000. We will take either an OB/GYN man or a family practitioner willing to do some obstetrics and gynecology. Please reply to Ad-720, *Texas Medicine*, 1801 North Lamar Blvd., Austin Texas 78701.

INTERNIST WANTED to join multispecialty group in Texas. Please give pertinent information and telephone number with first letter. Salary open, possibly $45,000 to $50,000. Please reply to Ad-721, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON: American graduate, preferably just out of residency to do all major surgery for well established clinic. Please reply to Ad-722, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTITIONER, before you decide on a location to practice, invest five minutes of your time in a collect call to: Gerald Moore, Lynn County Hospital District, Tahoka, Texas; 806-998-4533.

HOUSTON EMERGENCY PHYSICIANS ASSOCIATES has immediate openings for career oriented emergency physicians with surgical or emergency medicine backgrounds. Continuing education required. Teaching and non-teaching positions available in the city limits of Houston, Texas. Our physicians' present salaries are between $50,000 and $80,000 per annum based on tenure and experience. Flexible scheduling to allow for vacations and continuing education. Benefits include malpractice insurance, major medical, life, disability income. Call or send CV: Houston Emergency Physicians Associates, P. O. Box 36949, Houston, Texas 77036; 713-776-1081.

PRIMARY CARE POSITIONS available immediately. Assistance with travel, office overhead, and salaries or guarantees negotiable. For details send CV and preferences to Ad-725, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

NEED FULL TIME PHYSICIAN at medical facility of Gary Job Corps Center in resort community of San Marcos, Texas. Involvement is 8 a.m. to 5 p.m., Monday through Friday and on call alternate nights and weekends. Fringe benefits include a desirable housing arrangement and prepaid malpractice insurance. Salary upper $30s and negotiable. Contact Dr. M. D. Heatly, 512-396-6570 or at night 392-3044; or Mr. Al Martinez, Hospital Administrator, 396-6422; or write P.O. Box 645, San Marcos, Texas 78666.

NEEDED: PHYSICIANS to practice at Mexia State School, located in Central Texas just 30 minutes east of Waco. Many fringe benefits: retirement, sick leave, vacation, 40-hour week, group insurance. Salary range $34,300 to $38,300 depending on qualifications. An equal opportunity employer. Contact Medical Director, Mexia State School, P. O. Box 1132, Mexia, Texas 76667. 817-562-2821.

BOARD CERTIFIED OR ELIGIBLE PSYCHIATRIST. A Texas Community MH/MR Center is seeking a medical director to augment existing quality mental health program for a centrally located seven county area. The current mental health program operated by the center consists of outpatient diagnostic and evaluation services, emergency inpatient hospitalization services, individual and family counseling, medication checks, and alcoholism and drug abuse counseling. Salary is funded with fringe benefits at $37,500 to $42,000 per annum depending on qualifications. Contact: FayeNell Holamon, Personnel Officer, Central Texas MH/MR Center, P.O. Box 250, Brownwood, Texas 76801; telephone 915-646-9574.

GENERAL SURGEON: Board certified or eligible to join established multi-specialty group. Salary open. Texas licensed. B. A. Lawrence, M.D., 7630 Bellfort, Houston, Texas; 713-644-3344.

GENERAL PRACTITIONER NEEDED to join a group of 4 active GPs. Large suburban area. Open staff hospitals. Recreational and educational facilities available. Salary open. Robert E. Chapman, M.D., Fort Worth, Texas 76117; 817-834-8101.

NEUROLOGIST needed to begin neuropsychiatric group practice in Southwest Houston. Salary plus percentage. Position available beginning July 1. Send curriculum vitae to 902 Frostwood, Suite 104, Houston, Texas 77024; 713-467-2772.

VIGOROUS, PROGRESSIVE, ESTABLISHED multispecialty group. West Texas Medical Associates invites qualified internists, general surgeons, orthopedists, urologists, anesthesiologists, pediatricians to practice in San Angelo, Texas, a university community. Telephone: Administrator, 915-655-5761, ext. 211.

FAMILY PRACTICE opportunity in an attractive east Dallas suburban community of 7,000 people. This is an active practice in a community where you will be appreciated. Financial assistance and office space is available. A new 100-bed general hospital is 10 minutes away. Send detailed CV to Ad-726, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PSYCHIATRIST: The Beaumont State Center for Human Development, a facility of the Texas Department of Mental Health and Mental Retardation, is now seeking a psychiatrist. This psychiatrist will primarily be charged with the psychiatric/medical responsibilities for a 24-bed in-patient, short term residential treatment facility, providing subacute care for adult clients. Texas license. Must be board eligible or board certified. Salary commensurate with qualifications. Excellent employee benefits. For more details, write or call: J. M. Mericle, Personnel Officer, Beaumont State Center for Human Development, P.O. Box 3846, Beaumont, Texas 77704; 713-833-1485, ext. 32. An equal opportunity/affirmative action employer.

PHYSICIAN WANTED—recent graduate preferred, to join busy industrial clinic, 3 other doctors, as locum tenens or leading to full partnership. Start immediately, malpractice fee paid, no investment required. $3500 per month. Houston, Texas. Contact: Drs. Frierson, Wolf or Frnka, 2403 Caroline, Houston, Texas 77004; 713-654-9971.

Situations Wanted

SEEKING LOCATION: 31 year old, US trained general surgeon, will be board eligible July 1977. Experienced in endoscopy. Prefer medium to small community. Available July 1977. 504-455-7499, or write Ad-694, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST: 47 year old, board certified, AP-CP, native Texan. Presently lab director at 250 bed hospital. Desire to return to south or southwest. Excellent relationship with hospital administration and medical staff. References. Will furnish aggressive pathology service for progressive administration and medical staff. Please reply to Ad-713, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST—35, board certified AP-CP, FLEX, Texas Medical License under process. Planning to settle in Texas earliest opportunity. Seeking hospital based or group practice. Call 313-283-9172 after 5 p.m., or write Ad-718, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

MD—Graduate Ohio State University. Training and experience general medicine, allergy. Board certified anesthesiology. Interest is general adult medical practice with emphasis on pain problems. Solo or association. Prefer suburb of Dallas, Fort Worth, Austin, San Antonio, Houston or Corpus Christi. Please reply to Ad-716, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EL PASO, TEXAS: General surgeon, 32. Board eligible. Moving to El Paso in July 1977. Wishes to associate with group or partnership. Contact Ruben G. Ramirez, M.D., 5910 San Bernardo Avenue, # 102, Laredo, Texas 78041; 512-724-2138.

GROUP PRACTICE: Experienced physician. Dallas or Houston. Available September/October 1977. Please reply to Ad-723, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST: Board certified in AP & CP, now associate pathologist in New York state hospital. Seeks position in hospital or laboratory in Texas. Licensed in New York (FLEX). Please reply to Saramma John, M.D., Laboratory, Central Islip State Hospital, Central Islip, New York 11722.

SEEKING LOCATION: 31 year old board certified otolaryngologist. Presently serving military obligation which will be completed July 1978. Trained in general ENT, head and neck oncology, otology and facial plastics. Contact Bruce Meyers, M.D., 1017-B Drennan Park, Fort Campbell, Kentucky 42223.

DIAGNOSTIC RADIOLOGIST AVAILABLE January 1978. Will have completed University of Tennessee residency program including training in angiography, ultrasound and C.T. Seek practice opportunity in Central Texas. Write or call William Healy, M.D., 145 S. Greer, Memphis, Tennessee 38111. Phone 901-323-3737.

INTERNIST, BOARD ELIGIBLE, wife board eligible OB-GYN. Both well trained in USA. Desire suitable placement in Texas—solo, group practice, clinic or hospital based practice. Expect to get Texas license in June 1977. Dr. Suresh Shah, 6365 Eastondale, Mayfield Heights, Ohio 44124. Telephone 216-461-9738.

AVAILABLE: 34 year old OB/GYN, board eligible, FRCS, university trained. Available for group practice or partnership. Trained in laproscopy, fetal monitoring. Call 212-731-7161.

FAMILY PRACTITIONER awaiting office construction. Available for ER work or work in FPs office. Will commute from Beeville, Texas. Call 1-817-738-2807 or write F. Dehnisch, M.D., 4601 Winthrop Avenue East, Fort Worth, Texas 76116.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

GROWING NORTHEAST SAN ANTONIO, 55,000 population. No MDs. Five examining rooms, reception, large personal office, carpeted, air conditioned. Rent free details contact W. H. Gibson, 512-656-1166, night 512-651-6449.

FOR SALE DUE TO DOCTORS DEATH. Modern 2,000 sq. ft. clinic. Combination EENT and allergy practice. Fully equipped office, waiting and exam rooms. Facility easily adaptable to other types of practice. Price and terms negotiable. Prospering East Texas rural area with drawing radius of approximately 90 miles. Dedicated patient load. Additional benefits. Contact Mrs. Albertine Dean, P.O. Box 1089, Crockett, Texas 75835; 713-544-3171.

FURNISHED OFFICE FOR RENT: equipment for sale going concern. Fashionable area, North Dallas. Full adjoining lab facilities if wanted. Owner left town. Please reply to Ad-724, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN WANTED: Springtown, Texas. Urban community has medical clinic approved by state. Will build to suit the doctor. Service area has 38,000 people. 120 bed nursing home will be adjacent to clinic. Purchase or lease building. Flexible financing already approved. Area experiencing 48% growth rate, unlimited potential. A. G. Swan, P. O. Box 582, Springtown, Texas 76182.

X-RAY, (no fluoroscopy) and clinical laboratory facilities. Available for sale in fastest growing 1960FM area, Houston, Northwest suburb. Net income in excess of $25,000 in one year. Can sell one or combined. Please reply to Ad-714, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SELL OR RENT AN ESTABLISHED and lucrative medical practice in Oak Ridge North on Highway 45. (Basically pediatric.) MD interested, contact 713-444-8909 and after 7 p.m., 713-273-1017.

DOCTOR WANTS TO RETIRE: Will sell his very profitable hospital in Houston. 84-beds, operating, x-ray, emergency rooms. Much more. Everything you need. Used by several physicians. Great for a group. Financing available. For more information contact: Billie Sue Palmer, Fox Real Estate, Burnet, Texas 78611; telephone 512-793-2271 or on Tuesday and Thursday 512-756-2022.

BEAUTIFUL HILL COUNTRY RANCH. 8,200 acres, five miles Colorado River, many spring fed creeks, canyons, old gold mine, abundance of wild life. Perfect for a group. The price is $425 per acre. Financing available. Contact: Billie Sue Palmer, Fox Real Estate, Burnet, Texas 78611; telephone 512-793-2271 or on Tuesday and Thursday 512-756-2022.

AUSTIN—NEW PROFESSIONAL PARK. Int. Med., GP, FP, Peds, OB/GYN, ENT, Radiologist to associate in group setting for solo practice. University town, new hospital. Cannon Professional Park, 1110 William Cannon Drive, Austin, Texas 78745. Telephone 512-451-8484 or 512-444-1954.

LOTS ON LAKE CONROE, owned by allergist in Mexico. Contact James B. Carter, M.D., Suite 107, 1301 West 38th Street, Austin, Texas 78703.

DOCTORS WANTED: Physicians to serve North Austin and Round Rock. Will build to suit in prime location at Peyton Gin Shopping Center across from Lanier High School. Locate your office in a rapidly growing population center and at the same time reduce your exorbitant office rent. Phone 836-5472 or 345-1670 or write Cleto Elequin, M.D., 942 Peyton Gin, Austin, Texas 78753.

MD's OFFICE OF 1,000 square feet with lab, two bathrooms, two treatment rooms, private office and business office. Very reasonable rent in Oak City Center, Austin. Call 512-459-0286 daytime or 512-756-6657 after 5 p.m. Dr. J. E. Cummins, 410 South Water, Burnet, Texas 78611.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

ASPEN MUSHROOM CONFERENCE. Diagnosis and treatment of mushroom poisoning. Collection. Identification. Microscopy. Novice and advanced courses. AMA Category I. August 7-12. Hotel Jerome, Aspen, Colorado. Contact: Beth Israel Hospital, 1601 Lowell Blvd., Denver, Colorado 80204; 303-825-2190, ext. 354.

LYNN HOTEL, REDECORATED AND REMODELED. Next time in Dallas, try The Lynn Hotel, directly across from Baylor Hospital, 3401 Gaston Avenue. Call Ms. Marie Hamill, Manager, 214-824-6331.

GIVE YOUR PAPER the edge in the competition for publication. MedEdit medical editing service will correct grammar, advise on article format and choice of journal. Prompt service, reasonable rates. Write MedEdit, 2030 Guildhall Dr., Columbus, Ohio 43209, or call 614-235-4529.

WATCH FOR DETAILS!

TMA Conference on Medical Service

Sept. 10, 1977 Austin

Advertising Directory

American Physicians Insurance Exchange	4
Beverly Hills Hospital	12
Blue Cross-Blue Shield of Texas	22
Burroughs Wellcome	90
Chaparrosa Agri-Service	24
Comatic Laboratories	3rd Cover
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
Exxon Company	122
Insurance Corporation of America	66
Intercontinental Motors	12
Mead Johnson Laboratories	5
Kelsey-Seybold Clinic	93
Eli Lilly and Company	38
Medical Arts Clinic of Corsicana	108
Medical Liability Advisory Service	24
The Medical Protective Company	93
Merck Sharp & Dohme	123, 124
Pennwalt Corp.	36-37
The Prudential Insurance Company of America	9
Roche Laboratories	1-2, 34, 88-89
Roerig & Co.	17
Scott and White Clinic	Back Cover
Smith Kline & French	87
E. R. Squibb & Sons, Inc.	99-102
Starlite Village Hospital	122
Texas Bank and Trust Company	122
Texas Medical Association	
Automobile Leasing Program	35
Memorial Library Fund	104
Timberlawn Psychiatric Hospital	Back Cover
Torbet, Hutchins, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	108
Upjohn	18
Wichita Falls Clinic	24
Physicians' Directory	109-118
Classified Advertising	119-121

Publication of an advertisement in *Texas Medicine* is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

Staff Physician—Immediate Need

Exxon Company U.S.A.'s Medical Department, at the Baytown Refinery/Chemical Plant near Houston, has an opportunity for a physician. 3,500 industrial population; sophisticated long-established occupational Medical and Industrial Hygiene Department.

Salary competitive. Generous fringe benefits. Apply: Dr. W. W. Buttrick, Jr., P. O. Box 3950, Baytown, Tx. 77520.

EXXON

Starlite Village Hospital

Center Point, Texas

Ph.: 634-2212
634-2213

- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

CHAMPUS APPROVED
JCAH: ACCREDITED.

Bank Financing for Physicians

We specialize in equipment leasing and financing, unsecured loans and lines of credit to Physicians And we handle it all by mail.

Unsecured loans with optional dollar amounts (to $10,000), optional payment schedules. Equipment leasing to give you tax advantages, restore operating capital, convert unused depreciation to cash. And lines of credit to provide for future cash needs.

We charge tax deductible bank rates. You won't spend any of your valuable time at your bank, and you'll reserve your regular bank credit for times when you really need it.

For further information, complete and mail this coupon today. I want to know more about:

— Unsecured Loans — Sale & Lease Back Plans
— A Line of Credit — Lease-Purchase Plans
— Equipment Leasing — Equipment Financing
— Other: _____

Dr. _____ Phone _____
Address _____
City _____ State _____ Zip _____

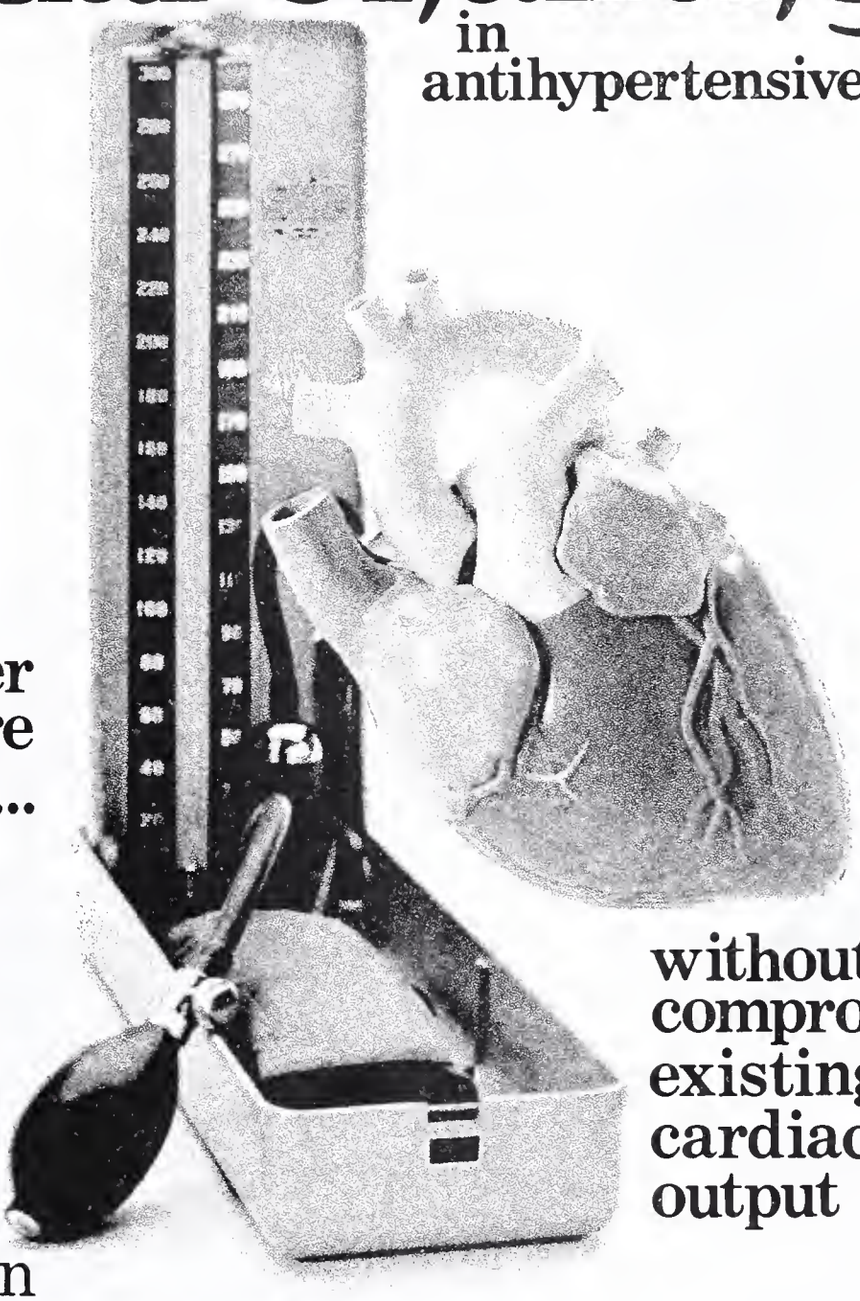
Professional Services Division
TEXAS BANK AND TRUST COMPANY
P. O. Box 101 Jacksonville, Texas 75766

Sojourn in the Ozarks for sports, scenery and CME

AMA's Regional CME Tan-Tar-A Golf and Tennis Resort Osage Beach, Missouri Sept. 16-18, 1977

Write:
Dept. of Meeting Services
American Medical Association
535 N. Dearborn St.
Chicago, Ill. 60610

A Dual Challenge in antihypertensive therapy



to lower blood pressure effectively...

without compromising existing cardiac output

in hypertension

TABLETS: 250 mg, 500 mg, and 125 mg

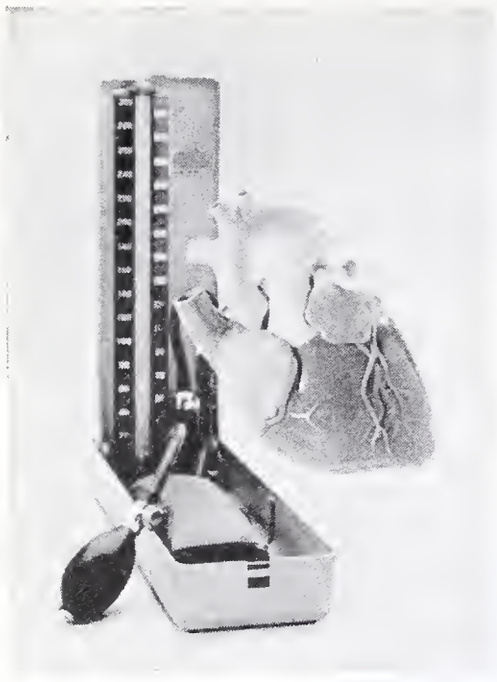
ALDOMET® (METHYLDOPA | MSD)

helps lower blood pressure effectively... usually with no direct effect on cardiac function–cardiac output is usually maintained

ALDOMET is contraindicated in active hepatic disease, hypersensitivity to the drug, and if previous methyldopa therapy has been associated with liver disorders.
It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

For a brief summary of prescribing information, please see following page.

MSD
MERCK SHARP & DOHME



in hypertension

ALDOMET®

(METHYLDOPA|MSD)

helps lower blood pressure effectively... usually with no direct effect on cardiac function– cardiac output is usually maintained

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis; if previous methyldopa therapy has been associated with liver disorders (see Warnings); hypersensitivity.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between 6 and 12 months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at 6 and 12 months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first 3 weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first 2 to 3 months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first 6 to 12 weeks of therapy or whenever an unexplained fever occurs. If fever and abnormalities in liver function tests or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, a reversible reduction of the white blood cell count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur. Patients should be followed carefully to detect side reactions or unusual manifestations of drug idiosyncrasy.

Use in Pregnancy: Use of any drug in women who are or may become pregnant requires that anticipated benefits be weighed against possible risks; possibility of fetal injury can not be excluded.

Precautions: Should be used with caution in patients with history of previous liver disease or dysfunction (see Warnings). May interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, falsely high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. It is important to recognize this phenomenon before a patient with a possible pheochromocytoma is subjected to surgery. Methyldopa is not recommended for patients with pheochromocytoma. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has recurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: *Central nervous system:* Sedation, headache, asthenia or weakness, usually early and transient; dizziness, lightheadedness, symptoms of cerebrovascular insufficiency, paresthesias, parkinsonism, Bell's palsy, decreased mental acuity, involuntary choreoathetotic movements; psychic disturbances, including nightmares and reversible mild psychoses or depression.

Cardiovascular: Bradycardia, aggravation of angina pectoris. Orthostatic hypotension (decrease daily dosage). Edema (and weight gain) usually relieved by use of a diuretic. (Discontinue methyldopa if edema progresses or signs of heart failure appear.)

Gastrointestinal: Nausea, vomiting, distention, constipation, flatus, diarrhea, mild dryness of mouth, sore or "black" tongue, pancreatitis, sialadenitis.

Hepatic: Abnormal liver function tests, jaundice, liver disorders.

Hematologic: Positive Coombs test, hemolytic anemia. Leukopenia, granulocytopenia, thrombocytopenia.

Allergic: Drug-related fever, myocarditis.

Other: Nasal stuffiness, rise in BUN, breast enlargement, gynecomastia, lactation, impotence, decreased libido, dermatologic reactions including eczema and lichenoid eruptions, mild arthralgia, myalgia.

Note: Initial adult dosage should be limited to 500 mg daily when given with antihypertensives other than thiazides. Tolerance may occur, usually between second and third month of therapy; increased dosage or adding a thiazide frequently restores effective control. Patients with impaired renal function may respond to smaller doses. Syncope in older patients may be related to increased sensitivity and advanced arteriosclerotic vascular disease; this may be avoided by lower doses.

How Supplied: Tablets, containing 125 mg methyldopa each, in bottles of 100; Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486 J6AMO7(707)

MSD MERCK SHARP & DOHME

Letters

Monitoring the Fetal Heart Rate

Dear Ms Baker:

In their article on fetal monitoring (*Texas Medicine* 73:42-46, Jan 1977), Drs. Werch, Hinkley and Wait gave a very good review of the clinical use of fetal heart rate (FHR) monitoring in the evaluation of the fetus during labor and delivery. Although the authors stated that monitoring of the fetus during the antepartum period is an important part of daily obstetrics, the use of FHR monitoring in that period of gestation as a source of information about the uteroplacental respiratory function and fetal well-being was limited to the oxytocin challenge test, a test which many clinicians think provides doubtful information.

The assessment of fetal well-being, especially in high-risk pregnancy, currently based on placental function tests, is one of the most controversial subjects in obstetrics. Very few of these tests, if any, can provide the obstetrician with reliable information about the *immediate* state of fetal well-being.

In recent years two clinical methods which provide reliable and predictive information about fetal condition in the antepartum period have been developed. The first is based on daily recording of fetal movements;[2-4] the second, on FHR monitoring. Application of this method of FHR monitoring in several hospitals in England[5-7] as well as the lately accumulated data in the literature,[8-11] demonstrate the benefits of this method. Its advantages are: (1) simplicity, (2) noninvasiveness, (3) minimal expense, (4) immediate availability of information, (5) high accuracy, and (6) independence of other hospital facilities.

We use this method as follows: In each patient in whom placental insufficiency is suspected, FHR and uterine activity patterns are obtained by external cardiotocograph with combined microphone and pressure transducer head. The procedure is performed either in the high-risk pregnancy clinic or in the hospital. The recommended duration of each recording is not less than 30 minutes. A normal FHR pattern is considered if there exist: (1) a baseline fetal heart rate within the normal range; (2) baseline variation and beat-to-beat variation of five beats or more, and (3) "reactive tachycardia" in response to fetal movements and/or uterine activity. Any diversion from this pattern indicates an abnormal fetal condition.

We found that there is a developmental pattern of FHR abnormalities, indicating progressive intrauterine fetal distress. This is summarized in the following table:

Pattern of FHR	Severity
Transient decelerations and disappearance of "reactive tachycardia" in relation to the naturally occurring spontaneous uterine activity	+
Plus: Regular decreased and often disappearance of baseline variation	+ −
Plus: Loss of beat-to-beat variation (sometimes coexisting with tachycardia) and constant late decelerations	+ + +
Plus: As fetal death approaches: Profound late decelerations with prolonged recovery	+ + + +

Since every fetus runs its own risk and there is no constant time interval between the appearance of each of the abnormal FHR patterns, it is recommended that fetal heart rate monitoring be commenced in high-risk pregnancies as soon as the fetus is viable, and performed at least daily once placental insufficiency is suspected. Our routine use of FHR monitoring antepartum and during labor has significantly reduced perinatal mortality and morbidity. A more widespread use of this method to improve perinatal outcome is justified.

David B. Weiss, MD, Houston;
Christopher Puge, MD,
Windsor, Berkshire, England.

References

1. Pritchard JA, Macdonald PC: Antepartum stress tests of uteroplacental sufficiency, in: Williams Obstetrics. New York, Appleton-Century-Crofts, 1976, pp 281-282.

2. Sadovsky E, Yaffe H: Daily fetal movement recording and fetal prognosis. Obstet Gynecol 41: 845-850, 1973.

3. Sadovsky E, Yaffe H, Polishuk WZ: Fetal movement monitoring in normal and pathologic pregnancy. Intern J Gynaecol Obstet 12:75-79, 1974.

4. Spellacy WN, Cruz AC, Gelman SR, et al: Fetal movements and placental lactogen levels for fetal-placental evaluation. A preliminary report. Obstet Gynecol 49(1):113-115, 1977.

5. Simmons SC: Organization of fetal intensive care. Clin Obstet Gynaecol (London) 1:217-240, 1974.

6. Weiss DB: Prenatal monitoring of fetal heart in high-risk pregnancies. (editorial) Harefuah 90(10): 488-490, 1976.

7. Weiss DB, Pugh C, Simmons SC: Daily antenatal cardiotocography in the management of high-risk pregnancies. Unpublished data.

8. Rochard F, Schifrin BS, Goupil F, et al: Nonstressed fetal heart rate monitoring in the antepartum period. Am J Obstet Gynecol 126(6): 699-706, 1976.

9. Emmen L, Huisjes HJ, Aarnoudse JG, et al: Antepartum diagnosis of the "terminal" fetal state by cardiotocography. Br J Obstet Gynaecol 82:353-359, 1975.

10. Sill H, Wilson EW: Antenatal fetal heart rate monitoring. Aust NZ J Obstet Gynaecol 15:132-135, 1975.

11. Fairbrother PF, Van Coeverden de Groot HA, Coetzee EJ, et al: The significance of prelabour type II deceleration of fetal heart rate in relation to Braxton-Hicks contractions. Report of four patients. S Afr Med J 48: 2391-3493, 1974.

Editorials

DECISION ON NHI ISSUE WAS RESULT OF DEMOCRATIC PROCESS IN ACTION

The Texas Medical Association's position on national health insurance will be to strive diligently to preserve private medical and health care and its financing by building upon the existing system of private health insurance, with minimum federal involvement.

In adopting a resolution to that effect at its May meeting in Houston, the House of Delegates also went on record as endorsing the active participation of both the TMA and AMA in the national health insurance debate, and reaffirmed guiding principles for evaluating NHI proposals.

While advocates of the resolution hailed its provisions as being politically realistic and in no way compromising policies already adopted by the House, opponents argued that "minimum" federal involvement in anything is a myth and that TMA should stand on principle and fight socialized medicine in any form.

In addition to the Council on Medical Legislation's resolution, which was finally adopted, county medical society delegates to the TMA considered four other resolutions having to do with national health insurance—one from the Navarro County Medical Society, two from the Tarrant County Medical Society, and one from the Brazoria County Medical Society.

The merits of each were debated with fervor and at length in a reference committee hearing which was, as always, open to any TMA member who wished to express an opinion.

Testimony before the reference committee reflected unanimity of medical philosophy and principles, and some undeniable differences of opinion as to practical politics and the legislative process.

The reference committee believed the more persuasive argument to be that the TMA and AMA should maintain, as an alternative to urging Congress not to adopt any national health insurance program, the position that if one is to be enacted, the AMA-sponsored version is a better bill than others that have been presented.

Under this view an "alternative" bill is considered to be a practical prerequisite to meaningful input to the form and substance of legislation, if any be enacted, on this subject. In addition, adherence to previously approved policy positions of TMA and AMA in this regard were seen as essential to continued credibility in Congress.

The reference committee recommended adoption of the resolution proposed by the TMA Council on Medical Legislation in lieu of the other four under consideration; had the topic been less volatile, the House might have simply adopted the recommendation and proceeded with its very lengthy agenda.

But one delegate asked that each of the four other resolutions be considered separately by the full membership of the House, and open debate on the House floor ensued as the probable results—some obvious and some not so obvious—of each proposal were explored again.

Proponents of both the minority and majority took full advantage of every opportunity in debate and parliamentary procedure, and this is as it should be. The final vote upheld the position submitted by the Council on Medical Legislation. It was a decision reached by the majority of delegates via the time-tested democratic process of open hearings, full debate, and respectful consideration of all views.

Congress has not enacted a national health insurance law, and it is extremely doubtful that any of the proposed plans could be passed without changes. In other words, the scores aren't in yet, organized medicine is still in the game, and the more unified its support can be, the better will be its chance to negotiate from a strong position in the legislative arena.

Aug77

TexasMedicine

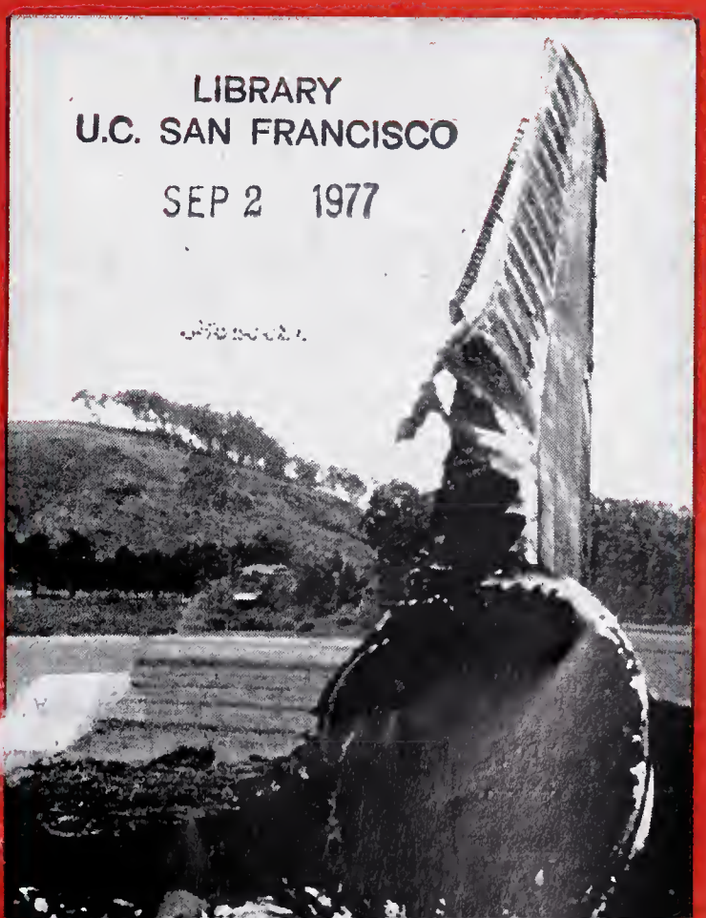
saster in the Canary Islands

Muscle biopsy histochemistry

Arthritis

Medical care and the Navajo Indians

Fractures of femoral neck



LIBRARY
U.C. SAN FRANCISCO
SEP 2 1977

Torbett-Hutchings-Smith Memorial Hospital
and Torbett-Hutchings-Smith Clinic

322 Coleman Street — Marlin, Texas 76661 — Telephone: 883-3561

Post Office Box 60

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.*
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

TRAUMATIC AND ORTHOPEDIC SURGERY
D. R. Swetland, M.D., F.A.C.S.

ALLERGY
S. W. Hughes, M.D.

CARDIOLOGY
W. F. McKinley, Jr., M.D.

OBSTETRICS AND PEDIATRICS
William Pickvance, M.D.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
Ronald E. Henderson, Jr., M.D.
David M. McTaggart, M.D.
S. M. Bunn, Jr., M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.*
Howard L. Smith, M.D., F.A.C.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

NEUROSURGERY
Harry H. Slade, M.D., F.A.C.S.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Associate Administrator:
Larry Parsons

Director-Coordinator, Nursing Service:
Vera Bee, R.N.

Director of Patient Care:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

*Expired May 17th, 1977.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street — DALLAS, TEXAS 75211 — Telephone 823-4151

INTERNAL MEDICINE
John B. Allen, M.D., D.A.B.I.M.
Morris E. Magers, M.D., D.A.B.I.M.
Channing Woods, M.D.
Richard C. Stone, M.D., Gastroenterology
Landon W. Stewart, M.D., D.A.B.I.M.
Cloyce L. Stetson, Jr., M.D., D.A.B.I.M.
David S. Sowell, III, M.D., D.A.B.I.M., Cardiology
Don E. Cheatum, M.D., D.A.B.I.M., and D.A.B. Rhu, F.A.C.P., Rheumatology
W. Mark Armstrong, M.D., D.A.B.I.M.
Sam W. Waters, M.D.
George E. Thomas, M.D., D.A.B.I.M.
Steven P. Bowers, M.D., D.A.B.I.M.
Carlos M. Kier, M.D., D.A.B.I.M., Rheumatology

ORTHOPEDIC SURGERY
George S. Phalen, M.D., D.A.B.O.S., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
John B. Miller, III, M.D., D.A.B.O.G.
Vernie D. Bodden, M.D.

PEDIATRICS
Halcuit Moore, M.D., D.A.B.P., F.A.A.P.
P. E. Luecke, Jr., M.D., D.A.B.P., F.A.A.P.
Larry Gray, M.D., D.A.B.P., F.A.A.P.

GENERAL SURGERY
George P. Fosmire, M.D., D.A.B.S., F.A.C.S.
Miller S. Bell, M.D., D.A.B.S., F.A.C.S.

UROLOGY
Harry M. Spence, M.D., D.A.B.U., F.A.C.S.
William H. Hoffman, M.D., D.A.B.U., F.A.C.S.
Richard B. Dulany, M.D., D.A.B.U., F.A.C.S.

RADIOLOGY
Raymond W. Burford, M.D., D.A.B.R.
Joe B. Caldwell, M.D., D.A.B.R.
James B. Evans, M.D., D.A.B.R.

DERMATOLOGY
William N. New, M.D., F.A.A.D., F.A.C.P.

OTOLARYNGOLOGY AND OTOLOGIC SURGERY
D. W. Shuster, M.D., D.A.B.O.

OPHTHALMOLOGY
R. M. Burnside, M.D., D.A.B.O.
James M. Copps, M.D., D.A.B.O.

DENTISTRY AND DENTAL SURGERY
J. Boyd Hollabaugh, D.D.S.
William F. Walton, D.D.S.
George D. Blake, D.D.S.
Larry L. Cowsert, D.D.S.

ADMINISTRATION
C. H. Rosamond, Administrator
Jack Green, Associate Administrator

DIRECTOR OF NURSING SERVICE
Miss Billye J. Norris, R.N.

INACTIVE STATUS
George M. Underwood, M.D., D.A.B.I.M., F.A.C.P., Gastroenterology
William H. Potts, M.D., F.A.C.P., Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics and Gynecology
Adam D. Green, M.D., Surgery
B. Celia Slaughter, M.D., D.A.B.P., F.A.A.P.
John B. Bourland, M.D., D.A.B.O.G.

THE ANXIETY-SPECIFIC.

- a predictable pattern of patient response
- seldom associated with serious side effects, in proper dosage
- rarely interferes with mental acuity
- used concomitantly with many primary medications
- three dosage strengths meet most patient needs

LIBRIUM® Ⓘⓥ

chlordiazepoxide HCl/Roche

5mg, 10mg, 25mg capsules

Libritabs® (chlordiazepoxide) available in 5 mg, 10 mg and 25 mg tablets.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) *Capsules,* 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) *Tablets,* 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see following page.

THE ANXIETY-SPECIFIC.

Since its discovery in the research laboratories at Roche, Librium has been the object of ongoing pharmacologic and clinical investigation.

The published record on Librium is enormous. So large, in fact, we put it into a computer literature retrieval system to make it more accessible in answering your inquiries.*

It's a record that reveals a consistent pattern of patient response. A highly favorable benefits-to-risk ratio. And minimal interference with many primary medications.

Doing one thing well. Basically, that's what Librium is all about.

LIBRIUM® ℞
chlordiazepoxide HCl/Roche

ROCHE

*If you have a question about Librium or any other Roche product, write to Professional Services, Roche Laboratories, Nutley, New Jersey 07110.

Please see preceding page for a summary of product information.

Texas Medicine
VOL 73 AUGUST 1977

Devoted to the Interest of the medical profession and public health in Texas

BOARD OF PUBLICATION
Don G. Harrel, MD, Dallas
Chairman
Sam N. Key, MD, Austin
Vice-Chairman
Merle W. Delmer, MD, San Antonio,
Secretary
Walter A. Brooks, MD, Quanah
R. Harvey Bell, MD, Palestine
C. W. Yates, MD, Rosenberg
Paul R. Meyer, MD, Port Arthur

TMA OFFICERS
John M. Smith, Jr., MD, San Antonio
President
A. J. Gill, MD, Dallas
Vice-President
Mylie E. Durham, Jr., MD, Houston
President-Elect
James G. Morris, MD, Lubbock
Secretary
Ben R. Keller, Jr., MD, Arlington
Treasurer
C. Lincoln Williston, Austin
Executive Director

EDITORIAL STAFF
1905 N Lamar Blvd, Austin 78705
Telephone: 512-477-6704
Marilyn Baker, Executive Editor
Rae Vajgert, Assistant Executive
Editor
Elise David, Assistant Editor
Donna Billie, Editorial Assistant
Patty Mullins, Secretary

ADVERTISING STAFF
1801 N Lamar Blvd, Austin 78701
Jon R. Hornaday, Advertising Director
Anne Shelnutt, Advertising Manager

SCIENTIFIC PUBLICATION
COMMITTEE
C. W. Daeschner, MD, Galveston
Chairman
Robert Askew, MD, Austin
Vice-Chairman
Ernest C. Butler, MD, Austin
Jesse D. Cone, MD, Odessa
Richard D. Cunningham, MD, Temple
George A. Gates, MD, San Antonio
Tracy R. Gordy, MD, Austin
David P. Green, MD, San Antonio
R. Maurice Hood, MD, Austin
Paxton H. Howard, Jr., MD, Temple
Daniel E. Jenkins, Jr, MD, Houston
Joseph Lancaster, MD, Austin
Francis E. McIntyre, MD, Austin
Paul C. Peters, MD, Dallas
H. Irving Schweppe, Jr., MD, Houston
Karen W. Teel, MD, Austin
Theodore P. Votteler, MD, Dallas

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104
SUBSCRIPTIONS
1801 N Lamar Blvd, Austin 78701
c/o Ray Riggs, Business Manager
$4 per year for members; $8 for non-members; $14 for foreign; $6 for libraries, hospitals, and universities; $4 for medical students. Single copy: $1.25.
CHANGE OF ADDRESS
1801 N Lamar Blvd, Austin 78701
c/o Edward R. Bierschenk,
Membership Director
Copyright 1977 by the Texas Medical Association. Owned and issued monthly by the Association.
Second Class Postage paid at Austin, Texas, and additional mailing office, under act of March 3, 1879. Publication number 796660.
Postmaster: Please direct correspondence to Marilyn Baker, Executive Editor, 1905 N Lamar Blvd, Austin, TX 78705.

Contents

Scientific Articles

43 Muscle biopsy histochemistry: a useful tool for evaluating patients who have neuromuscular disease Bernard M. Patten, MD; Shin-Siung Jung, MD; Karam Mata, BS, BA

50 Fractures of the femoral neck: a review article John K. Dozier, Jr, MD

59 Activity of rheumatoid arthritis during pregnancy Nancy T. Neely, MD; Robert H. Persellin, MD

70 Arthritis minimal care unit: evaluation of the first year Frank E. Emery, MD; Jerry C. Daniels, MD, PhD; Rosalie Lopopolo, MA, LPT; Beryl Fernandez, OTR; William T. Fischer

74 Technetium-99m stannous pyrophosphate myocardial scintigraphy in the recognition of acute subendocardial myocardial infarction Lawrence R. Poliner, MD; Robert W. Parkey, MD; L. Maximilian Buja, MD; Ernest M. Stokely, PhD; Frederick J. Bonte, MD; James T. Willerson, MD

82 Quality of care evaluation George L. Adams, MD; Joan R. Brochstein, MPH, MSW; Michael P. Tristan, MD, MPH; Charles C. Cheney, PhD; Janice Friese, BA

Features

88 Disaster

97 N'd Ha Laago

Editorials

134 Organized medicine's viewpoint on cost containment and planning John M. Smith, Jr, MD

136 Planning for medical disaster is key to effective response Frank M. Townsend, MD

News

7 TMA medical service conference will be September 10 in Austin

7 Charles Max Cole, MD, elected to AMA Board of Trustees

10 Proposals for reducing malpractice insurance cost not adopted, Keeton says

15 Discipline actions against doctors triple in five years, AMA reports

16 TMA Will sponsor county medical society executive conference

21 AMA accredits Baylor center for continuing education

Departments

25 Capital Comments

31 Continuing Education

38 Meetings

86 Information for Authors

108 Medical Newsmakers

110 Medicine and the Law

112 Medicine and Literature

115 Deaths

133 Letters

On The Cover

Any community that is served by a commercial air carrier entertains the risk of having 67 severely injured patients suddenly thrust into local medical facilities. It is not necessary to have a spectacular 747 accident as happened in the Canary Islands March 27, 1977. A description of the Canary Island disaster from a medical standpoint begins on page 88.

Brief Summary of Prescribing Information

Actions: Pyrvinium pamoate appears to exert its anthelmintic effect by preventing the parasite from using exogenous carbohydrates. The parasite's endogenous reserves are depleted, and it dies. Povan is not appreciably absorbed from the gastrointestinal tract.

Indication: Povan is indicated for the treatment of enterobiasis.

Warnings: No animal or human reproduction studies have been performed. Therefore, the use of this drug during pregnancy requires that the potential benefits be weighed against its possible hazards to the mother and fetus.

Precautions: To forestall undue concern and help avoid accidental staining, patients and parents should be advised of the staining properties of Povan. Care should be exercised not to spill the suspension because it will stain most materials. Tablets should be swallowed whole to avoid staining of teeth. Parents and patients should be informed that pyrvinium pamoate will color the stool a bright red. This is not harmful to the patient. If emesis occurs, the vomitus will probably be colored red and will stain most materials.

Adverse Reactions: Nausea, vomiting, cramping, diarrhea, and hypersensitivity reactions (photosensitization and other allergic reactions) have been reported. The gastrointestinal reactions occur more often in older children and adults who have received large doses. Emesis is more frequently seen with Povan Suspension than with Povan Filmseals.

How Supplied: Each Povan Filmseal® contains pyrvinium pamoate equivalent to 50 mg pyrvinium, supplied in bottles of 50 (NDC 0710-0747-50; NSN 6505-00-134-1966). Povan Suspension, a pleasant-tasting, strawberry-flavored preparation containing pyrvinium pamoate equivalent to 10 mg pyrvinium per milliliter, is supplied in 2-oz bottles (NDC 0071-1254-31; NSN 6505-00-890-1093).

RC/RD PD-JA-1699-2-P (8-76)

Parke, Davis & Company
Detroit, Michigan 48232

When it's pinworms, treat the family

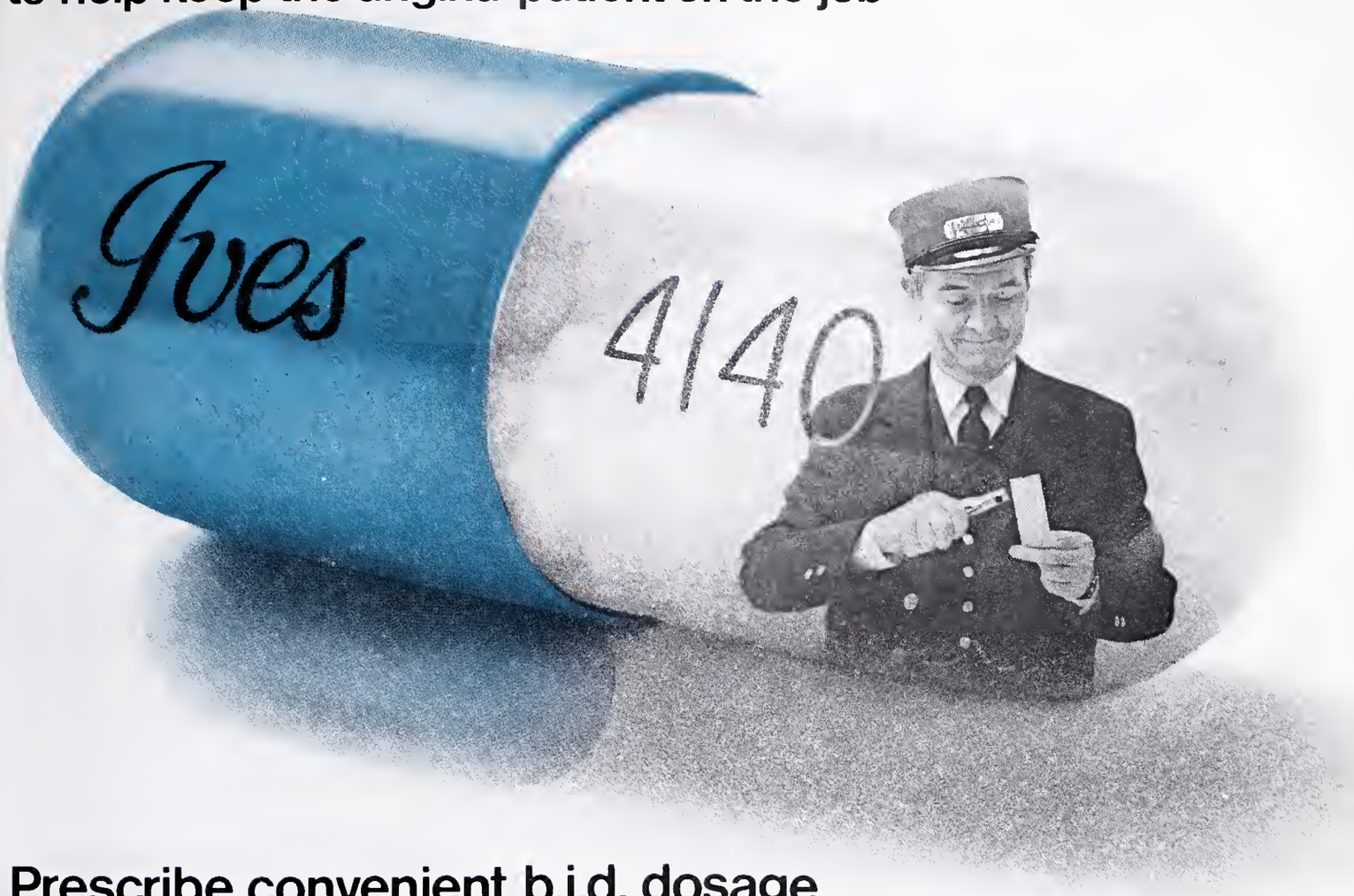
Povan® (pyrvinium pamoate)

- over 17 years of proved clinical effectiveness and safety
- no measurable absorption from the GI tract—minimal systemic side effects
- one dose—one time—that's all that's usually required
- two dosage forms: Tablets and Suspension—suitable for the entire family

Povan—there's a form for every member of the family.

PARKE-DAVIS

to help keep the angina* patient on the job



Prescribe convenient b.i.d. dosage to encourage patient compliance

ISORDIL® TEMBIDS® CAPSULES
(isosorbide dinitrate)

SUSTAINED ACTION CAPSULES, 40 mg

- designed specifically to provide 8 to 10 hours of sustained prophylaxis against angina pectoris attacks
- b.i.d. dosage is frequently satisfactory to prevent angina attacks... dosage range: 1 capsule b.i.d. to q.i.d.
- stable...retains potency without significant loss or variation

*__Indications:__ Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:
"Possibly" effective: When taken by the oral route, Isordil is indicated for the relief of angina pectoris (pain of coronary artery disease). It is not intended to abort the acute anginal episode, but is widely regarded as useful in the prophylactic treatment of angina pectoris.
Final classification of the less-than-effective indications requires further investigation.

__Contraindication:__ Idiosyncrasy to this drug.

__Warnings:__ Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

__Precautions:__ Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.

__Adverse Reactions:__ Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

__Dosage:__ Every 6 to 12 hours according to need.

Consult direction circular before prescribing.

May we send you reprints, detailed information and/or professional samples?

TEMBIDS®—TRADEMARK FOR SUSTAINED ACTION CAPSULES

IVES LABORATORIES INC.
New York, N.Y. 10017

DEDICATED TO IMPROVING THE QUALITY OF LIFE THROUGH MEDICINE®

News in brief

TMA medical service conference

The TMA Conference on Medical Service will be September 10 in Austin. The program includes panel discussions on professional liability insurance in Texas and new state laws affecting physicians, and presentation of the TMA Distinguished Service Award to Wendell Hamrick, MD . . . 7

AMA meeting

Charles Max Cole, MD, a past president of TMA, was elected to a one year term on the AMA Board of Trustees during the AMA convention in San Francisco. The AMA House of Delegates reaffirmed support for the AMA's bills, HR 1818 and S218, the Comprehensive Health Care Insurance Act . . . 7

Medical discipline

Statistics compiled by the American Medical Association from 47 states show that the number of disciplinary actions against physicians has tripled in the past five years . . . 15

Texas medical school graduates

Texas medical schools conferred 674 MD degrees in 1977. Included in that total are 565 males and 109 females. Fifty-five percent of the 1977 graduates plan to enter primary care for graduate medical education . . . 16

Continuing education

The American Medical Association Council on Medical Education has accredited Baylor University Medical Center, Dallas, for continuing medical education for four years. The accreditation makes Baylor eligible to offer programs for Category 1 credit under the AMA Physician's Recognition Award . . . 21

News in detail

TMA medical service conference will be September 10 in Austin

The TMA Conference on Medical Service will be September 10 at the Joe C. Thompson Center in Austin.

The program includes panel discussions on professional liability insurance in Texas and new state laws affecting physicians, and presentation of the TMA Distinguished Service Award to Wendell Hamrick, MD.

Invited guest speakers include Ralph Emerson, MD, Roslin Heights, NY; Rep Robert Krueger, New Braunfels; Tom Nesbitt, MD, AMA president-elect, Nashville, Tenn; and Kenneth A. Platt, MD, Westminster, Co.

Milton V. Davis, MD, Dallas, Vice Speaker of the TMA House of Delegates, will moderate the panel discussion on professional liability insurance in Texas. Panel members include Ace Pickens, JD, and Jack D. Maroney, JD, of the firm of Brown, Maroney, Rose, Baker, and Barber, TMA Legal Counsel; David Lowe, Fort Wayne, Indiana, Vice President and Secretary of the Medical Protective Company; Sam A. Nixon, MD, Floresville, Chairman, TMA Council on Communication; and E. Don Webb, MD, Houston, Chairman, TMA Committee on Professional Insurance.

Ed W. Schmidt, MD, Pecos, will moderate the panel discussion on new state laws affecting physicians. Panelists include Joseph T. Ainsworth, MD, Houston, Chairman, TMA Council on Medical Legislation; Will Barber, LLB, Austin, a member of the firm of Brown, Maroney, Rose, Baker, and Barber, TMA Legal Counsel; Elgin W. Ware, Jr, MD, Dallas, member of TMA Council on Medical Legislation; D. Clifford Burross, MD, Wichita Falls, member of TMA Council on Medical Legislation; and Val C. Borum, MD, Fort Worth, member of TMA Council on Medical Legislation.

The conference will begin at 8:30 am and continue through 2:45 pm.

There will be an Orientation Program for new and transfer members.

TMA boards, councils and committees will meet September 9, 10, and 11.

Conference participants will be guests of TMA for the luncheon September 10 at the Joe C. Thompson Center.

Charles Max Cole, MD, elected to AMA Board of Trustees

Charles Max Cole, MD, a past president of TMA, was elected to a one year term on the AMA Board of Trustees during the AMA convention in San Francisco, June 18-23.

Dr Cole, a Dallas surgeon, said during his campaign that the AMA is the single strongest voice in medicine in this country. "It must seek the support of specialty societies and other physician organizations to create an ever more potent representation in behalf of the principles and practices and freedoms that characterize our present system. This is in the best interest of the health of our people."

The AMA must continue to assume an aggressive posture in its relationship with government, resorting to legal redress when appropriate, Dr Cole said.

Dr Cole has also served as a member of the Texas State Board of Health, the Texas Medicaid Task Force, the Board of Directors of the North Texas Planning Council for Hospitals, the Board of Trustees of the Southwestern Medical Foundation, and the Medical Advisory Committee of the Texas Department of Public Welfare.

Dr Cole is a Diplomate of the American Board of Surgery and a Fellow of the American College of Surgeons.

He received his medical education at the University of Iowa College of Medicine.

Other Texans elected

Nancy W. Dickey, Houston, has been elected to a three-year term on the AMA Council on Medical Service, as the resident member. Dr Dickey is a second-year resident in family practice in the Memorial Hospital System.

The Hektoen Gold Medal was awarded to Kenneth E. Salyer, MD, and Donnell F. Johns, MD, Division of Plastic Surgery, University of Texas Southwestern Medical School, Dallas.

They presented an exhibit, "Spectrum of Research and Clinical Management of Craniofacial Anomalies," at the AMA meeting. The Hektoen Medal is presented for exhibits of original investigation which are judged on the basis of originality and excellence of presentation.

N. V. Duke, a 16-year-old Cyprus High School student, was recognized by the AMA as the winner of the International Science and Engineering Fair for her exhibit, "Detoxification of Poison Ivy Uroshial."

Harvey Renger, MD, Hallettsville, was selected President-Elect of the Conference of Presidents and Other Officers of State Medical Associations.

Warren J. Raymer, MD, Houston, was elected to the AMA Section Council on Allergy.

Coy Z. Foster, MD, Dallas, was elected vice chairman of the AMA Resident Physicians Section. Russell Kridel, MD, Houston, was elected as an alternate delegate representing the Resident Physician's Section to the AMA House of Delegates. Bill Golden, a medical student at Baylor College of Medicine in Houston, was elected as an alternate delegate representing the Medical Students Section to the AMA House of Delegates.

Whitney Sampson, MD, Houston, was elected as the alternate delegate to the House of Delegates by the AMA Section Council on Ophthalmology.

Texas resolutions

The Texas resolution calling for reaffirmation of guidelines for evaluating the various proposals for National Health Insurance pending before Congress figured prominently in the discussions of the AMA House of Delegates. The resolution also asked the House of Delegates to reaffirm the AMA's active participation in the NHI debate.

After considering many resolutions and reports, the House of Delegates reaffirmed its support for the AMA's bills, HR 1818 and S 218, the Comprehensive Health Care Insurance Act.

Charles Max Cole, MD, left, confers with Sam A. Nixon, MD, center, while Mylie Durham, MD, listens to proceedings during the AMA House of Delegates session.

THE ROMANS
HAD A PHRASE FOR IT...

CAVEAT EMPTOR

It's always wise to know what you buy....

THE TEXAS MEDICAL ASSOCIATION

takes pride in their insurance brochure which describes the various provisions of the Group Insurance Plans

TERM LIFE
LONG TERM DISABILITY
OFFICE OVERHEAD EXPENSE DISABILITY
PERSONAL ACCIDENT
and
MAJOR MEDICAL EXPENSE

Compare
DOLLAR for DOLLAR
BENEFIT for BENEFIT

Know what you are buying and then buy the plan most suitable to your needs.

Write for a detailed T.M.A. Insurance Brochure today

TEXAS MEDICAL ASSOCIATION

Insurance Service Office
1801 N. Lamar Blvd.
Austin, Texas 78701

Underwritten By ***Prudential***

The House took the position that the AMA's legislation represents a viable program and a focal point for providing the Association's views on National Health Insurance.

At the same time, the House of Delegates reaffirmed the AMA's total opposition to the nationalization of the medical profession.

The AMA House of Delegates turned down a Texas resolution asking the AMA to strive to change Medicare regulations or law to permit a consulting physician to certify that he has rendered the service for which payment is requested. The consulting physician would be eligible to receive reimbursement without having to obtain the patient's signature on the claims form.

The AMA House turned down the resolution on the basis that such a change would not be desirable or feasible at this time of demand for public accountability.

The AMA House of Delegates referred a Texas resolution, Payment for Ambulatory Cardiac Rehabilitation by Medicare and Private Health Insurance, to the AMA Board of Trustees for study.

The resolution asked the AMA to urge the Bureau of Health Insurance, Social Security Administration, and private insurance companies to accept cardiac rehabilitation services rendered in the physician's office or clinic as legitimate and needed, and to authorize reimbursement for those services.

The AMA House of Delegates also referred to the AMA Board of Trustees a Texas resolution which called for the AMA to urge the Bureau of Health Insurance and the Social Security Administration to permit charges for social services to be billed to the individual patient requiring and receiving those benefits.

The Texas resolution emphasized that there is recognized value in services provided by social workers to patients in hospitals.

The AMA House of Delegates adopted memorial resolutions expressing sorrow at the deaths of N. L. Barker, MD, Paris, and Joe T. Nelson, MD, Weatherford.

Dr Barker was a past president of the TMA, the Fourteenth District Medical Society and the Lamar-Delta County Medical Society.
He also served as a delegate and alternate delegate to the AMA from 1964 through 1977.

Dr Nelson was a member of the AMA and TMA Boards of Trustees. He had served as chairman of the TMA Council on Medical Legislation, president of the Southern Medical Association, chairman of the Board of Directors of TEXPAC, delegate and alternate delegate to the AMA from 1967 to 1974, and a member of the boards of regents of the University of Texas System and North Texas State University.

Proposals for reducing malpractice insurance cost not adopted, Keeton says

Several significant proposals for reducing the cost of medical malpractice insurance in Texas were not adopted in the recent malpractice bill passed by the Texas Legislature, says Page Keeton, former dean of the UT School of Law.

Keeton, chairman of the 18-member Texas Medical Professional Liability Study Commission, said while, on the whole, "the malpractice legislation passed this year will be helpful," it failed to adopt "significant recommendations made to reduce cost."

Keeton makes his observations in an article in the current issue of *Discovery*, a UT Austin journal of research and scholarship.

Among Study Commission recommendations which Keeton says were designed to reduce the cost of handling claims, but which were not incorporated in the final bill, were provisions calling for all claims to be processed through a screening panel before a lawsuit could be filed and for the use of voluntary arbitration regarding damages.

Other important recommendations that were not adopted dealt with damages, he says.

"The Study Commission recommended that damages for non-economic losses, that is, for pain and suffering, be limited to $100,000. This was not adopted.

"The Study Commission also recommended that the trial judge reduce any award of damages by any amount received by an injured person from other sources, such as hospital insurance and accident insurance policies. This was not adopted.

"As a substitute for the Study Commission's recommendation," Keeton continues, "the bill

as passed provides for a limitation of $500,000 on damages other than for expenses. This will have very little impact on cost in this area."

But, Keeton sees improvements resulting from the recent legislation.

He says the bill as passed will be "helpful in guaranteeing the availability of adequate insurance coverage to all doctors."

Noting that in past years insurance coverage in excess of $300,000 per person per occurrence was often unavailable at any price, Keeton says "under the new bill, insurance will be available up to $750,000 per person per occurrence. This is a substantial improvement."

Also, he says the new bill assures that a surcharge cannot be made by an insurance company against doctors and other health care providers except on the basis of claims actually paid. Surcharges previously were made whenever a claim was filed, even though the claim later proved to be without merit.

"These recommendations and others in the insurance area will not reduce costs of processing claims," he states, "but I do believe that they will make it much more likely that future insurance rates approved by the State Board of Insurance will be no more than reasonably necessary to recoup costs with reasonable profit."

Keeton says that Study Commission recommendations, substantially included in the final bill, probably will reduce incidents of medical mishaps by giving the Board of Medical Examiners more powers to cancel, suspend, and qualify a physician's license to practice.

Moreover, he continues, insurers will be required to report about all kinds of mishaps involved in the claims filed on hospitals and doctors.

"With the information, no doubt some progress can be made by the medical profession in improving hospital procedures where most mishaps occur," Keeton says.

He takes hope that the bill's requirement that notice must be given to a doctor 60 days before filing a claim "ought to be helpful in getting resolution of some claims without law suits."

The TMA House of Delegates voted in May 1977 to honor Keeton at the November House of Delegates meeting for his contributions to the people of Texas through service on the Texas Medical Professional Liability Study Commission.

State Board will study clinical laboratory billing law

The Texas State Board of Medical Examiners is initiating a special study of HB 1309, the clinical laboratory billing law.

The bill, passed by the 65th Texas Legislature and signed by Gov Dolph Briscoe, will require physicians and other professionals who bill patients for tests which are performed by laboratories outside their offices to provide patients with the name of the laboratory and the amount paid for the tests.

The State Board of Medical Examiners has a responsibility to conduct a public hearing prior to the promulgation of any guidelines or rules.

The public hearing is expected to be scheduled later this year. The TMA Council on Medical Legislation and the TMA Board of Councilors will present a position statement representing the Texas Medical Association at the hearing.

HB 1309 does not apply to laboratories which actually are a part of the offices of physicians. The legislation will pose no additional obligation on the physician if the laboratory bills the patient directly for those services. The American Medical Association and the Texas Medical Association support the principle that all physicians should bill patients directly for their services.

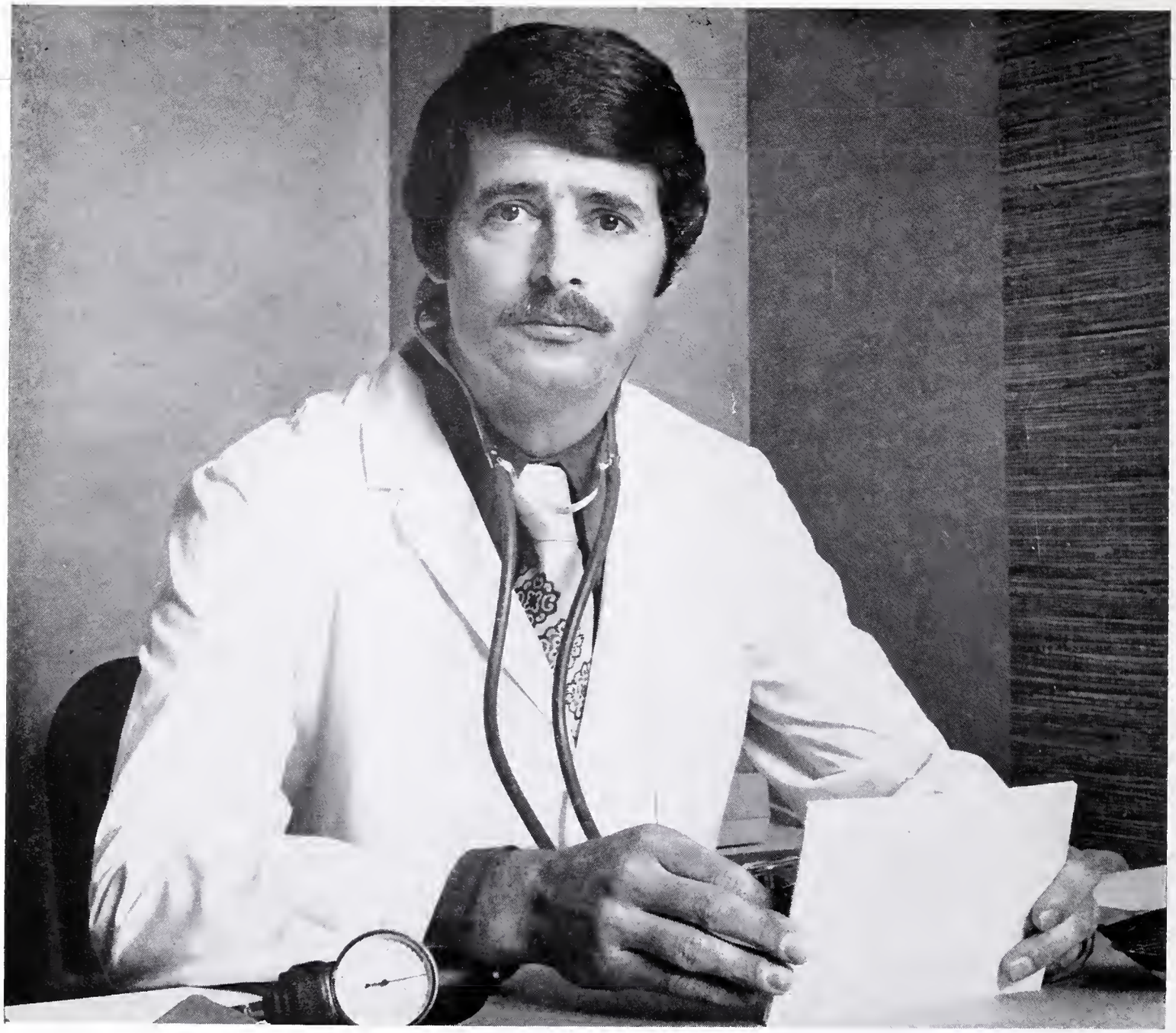
The legislation will apply to those physicians who bill patients for tests which are performed by outside laboratories.

AMA supports FDA efforts in preventing Laetrile distribution

The American Medical Association "wholeheartedly supports" the efforts of the Food and Drug Administration in preventing the distribution of Laetrile in interstate commerce "until it is shown to be safe and effective as required by law."

The AMA made the statement to the Senate Subcommittee on Health. The AMA said, "quality patient care would suffer if Laetrile were made available without such compliance."

The AMA stressed that "Laetrile has never been shown to be effective for the treatment or prevention of cancer in any well-documented or controlled scientific test" and pointed out that proponents of Laetrile "rely upon undocumented testimonials as to cures and remissions."



If you take care of your people, they'll take care of you.

It's simple human relations.

To keep good people on your staff—whether you're just starting a practice, or well along in your career—you've got to pay them well. Not with just money, but with other things, like health insurance.

And, being in the medical profession, you know how important it is to provide your people with the best coverage available.

Blue Cross and Blue Shield coverage will assure you of that. We return more of our premiums in claim payments to policyholders than most other major insurance companies. And we don't set maximum dollar limits on most hospital services.

You might get group health insurance at a lower rate. But when you think of how much your people are worth to you, we think you'll find them worth every nickel that Blue Cross and Blue Shield coverage costs.

Do you think enough of your people to provide the best?

Blue Cross
GROUP HOSPITAL SERVICE, INC
Blue Shield
GROUP LIFE & HEALTH INSURANCE COMPANY
of Texas

®, Registered Mark Blue Cross Association
® Registered Service Mark of the National Association of Blue Shield Plans

Texas A&M College of Medicine accepts first class

Texas A&M University's College of Medicine, the state's newest medical school, has selected its first students.

They average two years younger than the national norm for beginning medical students and rank higher scholastically.

Texas A&M's medical school differs from traditional programs in that students may be accepted and begin their medical studies prior to receiving their undergradate degrees.

Under the Texas A&M concept, students will follow a pre-clinical curriculum during what would normally be their junior and/or senior years on the main Texas A&M campus and then continue with the clinical phases of their medical education for two years at locations away from College Station, including Scott and White in Temple and VA hospitals in Temple, Waco, or Marlin.

The 32-member class has an average age of 20 and a grade point ratio of 3.83, based on a 4-point system. The mean average is 3.55 nationally and 3.48 for Texas.

Women comprise 21% of the class convening August 29.

Texas A&M's program has been formed over the past five years in association with Baylor College of Medicine, Scott and White Memorial Hospital and the Veterans Administration.

The VA has awarded Texas A&M grants totaling more than $17 million under provisions of the VA Medical School Assistance and Health Manpower Training Act designed to help relieve the shortage of physicians and allied health personnel generally and particularly with the VA system.

In essence, Dr William E. Ward, associate dean for student affairs, observed, the Texas A&M program allows students to complete their MD requirements one or two years sooner than under traditional medical programs because they start their medical training while still undergraduates.

He said 14 of the accepted students completed their sophomore year this past spring, while 16 were in their junior year and two were seniors.

All the students selected are Texans, with more than a quarter of the class coming from non-metropolitan areas throughout Texas.

Dean Ward said the high percentage of non-metropolitan students is viewed as an encouraging sign that a significant number of them may choose to practice medicine in smaller communities. Helping to provide doctors for non-urban areas is one of the objectives of the Texas A&M medical school, he noted.

"The scholarship of the students applying here was extremely high," Dr Ward said but pointed out that grades alone did not automatically qualify a student. "We also took a close look at each student as an individual. In this subjective aspect, we were interested in extracurricular activities and community service, for example."

Diabetes foundation announces fellowships in research

The Juvenile Diabetes Foundation is sponsoring postdoctoral fellowships in diabetes research for the funding year July 1, 1978, through June 30, 1979.

The applicant, by the beginning of the period of support sought, must have a doctoral degree, or the equivalent, from an accredited institution and shall not be simultaneously serving an internship or residency.

The applications may be obtained from Grant Administrator, Juvenile Diabetes Foundation, 23 East 26th Street, New York, NY 10010. The completed applications must be postmarked not later than Sept 10, 1977.

Baylor receives grant from the Muscular Dystrophy Association

A $1.3 million grant has been awarded by the Muscular Dystrophy Association to Baylor College of Medicine for its Jerry Lewis Neuromuscular Disease Research Center.

In addition to a $288,984 research grant renewal from the Scientific Advisory Board of the Muscular Dystrophy Association, $1 million was granted by the board for completing and equipping a research unit to be located in the Neurosensory Center, a new joint project of Baylor and The Methodist Hospital.

The project is under the leadership of Stanley H. Appel, MD, recently named professor and chairman of Baylor's department of neurology and director of the Jerry Lewis Center.

TMA Executive Board adopts statement on computed tomography

The TMA Executive Board has adopted a statement on computed tomography proposed by the Ad Hoc Committee on CT Scanners.

The statement, proposed by the committee of J. E. Miller, MD, chairman, Edwin R. Buster, III, MD, Marvin C. Overton, III, MD, and John R. Derrick, MD, was adopted by the Executive Board at a July 10 meeting in Austin.

In summary the statement says, "When appropriately located, properly utilized, and correctly supervised, CT scanners can have a positive impact on both limiting the cost and improving the quality of care.

"Through reduction or elimination of hospital stays, replacement of other expensive and more hazardous diagnostic studies, and avoidance of some operative procedures, cost should be contained. Earlier and more precise diagnosis will give the opportunity to modify therapeutic approaches which may be expected to improve the outcome and/or the quality of life.

"Access to this new technology must, therefore, be assured to those patients who may be expected to benefit from the procedure," the committee says.

"Computed tomography involves the exposure of patients to ionizing radiation. Its use should be restricted to individuals with the necessary training in radiation protection to optimize examination safety. Radiation physics support should also be available," recommended the committee.

"The number of different imaging procedures available in diagnostic radiology, ordinary diagnostic procedures, ultrasound, angiography, radionuclide scanning, and computed tomography make selection of appropriate studies for a specific patient increasingly difficult. Ideally, the clinician should develop expertise with all of these imaging modalities to determine which procedure is best suited to a specific clinical situation.

"This can best be accomplished through continuing education at the hospital medical staff level and through appropriate consultation with specialists in the imaging field," the committee recommended.

Texas Department of Health Resources becomes Texas Department of Health

The Texas Department of Health is the new name for the Texas Department of Health Resources effective August 29.

The name was changed by legislation passed during the 65th session of the Texas Legislature.

The headquarters of the Texas Tech University College of Medicine and Health Sciences Centers in Lubbock was dedicated June 5, 1977. Present for dedication ceremonies were State Sen Kent Hance, Lubbock, and Gov and Mrs Dolph Briscoe. The $40 million medical structure houses basic sciences departments, clinical departments and support services.

Discipline actions against doctors triple in five years, AMA reports

Statistics compiled by the American Medical Association from 47 states show that the number of disciplinary actions against physicians has tripled in the past five years.

In 15 states which have enacted legislation making the reporting of professional malpractice mandatory, the number of investigations initiated by the state medical disciplinary bodies has increased six-fold.

Much of this six-fold increase can be attributed to the immunity provisions for those required to report under these laws, said James H. Sammons, MD, executive vice president of the AMA. Dr Sammons reported on the survey to the AMA House of Delegates convening in San Francisco, June 19.

"Doctors are willing to discipline the profession, but we need more clout," declared Dr Sammons in urging other states to adopt the tougher disciplinary laws.

The AMA chief executive pointed out that medical societies have no disciplinary authority other than to censure and expel from membership, which doesn't stop the doctor from practice of medicine. More stringent discipline—placing on probation or revoking licenses—is handled by the state medical licensing board in each state, he said.

When state law makes it mandatory for a physician to report a colleague who is believed to be guilty of malpractice, and provides immunity for such reporting, the physician may do so without fear of civil liability to the reported doctor. Alabama, Arizona and Idaho have enacted such laws.

In a study of the actions of the nation's medical disciplinary boards, the AMA found the number of disciplinary actions initiated rose nationwide from 1,275 in 1971 to 4,236 in 1976. The number of licenses revoked rose from 45 in 1971 to 130 in 1976. The number of physicians placed on probation rose from 57 in 1971 to 185 in 1976.

The AMA program consists of a three-pronged legislative effort to strengthen medical discipline. One focuses on the physically or mentally impaired physician, often disabled by alcohol or narcotic addiction or deterioration through aging. Thirty states including Texas have enacted legislation designed to deal with impaired physicians.

"By giving the licensing boards something more than the draconian choice between revoking or not revoking a license," says Dr Sammons, "the AMA believes that more appropriate, and more effective, and more frequently imposed discipline will result."

In summarizing activities in the area of coping with physicians who have problems with alcohol or narcotics, Dr Sammons pointed out that more state licensing boards can now intervene and take action before harm is done.

Also, twenty-five state medical societies including Texas have initiated impaired physician programs.

There are no definitive studies that provide a concise, scientifically valid count of impaired physicians. There are only estimates. The AMA estimates that 4 to 5%, or 17,000, out of a total of more than 400,000 physicians may have impairments such as alcohol or narcotic addiction.

Veterans Administration begins VA Scholars Program

The Veterans Administration has initiated a new program, the VA Scholars Program, to prepare outstanding individuals to assume significant roles in the development and management of large health care systems.

The program is sponsored by the Veterans Administration and George Washington University. The program will provide a two to four year opportunity for mid-career health professionals to prepare for senior level positions within the health care system.

Applicants will be sought from fields of medicine, dentistry, nursing, allied health, hospital administration, public health administration, health education, economics, and operations research.

The scholars' salary level will equal their present compensation up to the maximum allowed under Civil Service and/or VA regulations.

For further information write Harrison Owen, Acting Executive Director, VA Administrative Scholars Program (107), Veterans Administration, Washington, DC 20420.

Texas medical schools confer 674 MD degrees in 1977

Texas medical schools conferred 674 MD degrees in 1977.

Included in that total are 565 male graduates and 109 female graduates.

Texas Tech University School of Medicine conferred 45 MD degrees; the Medical School at The University of Texas Health Science Center at Houston conferred 44; the Medical School at The University of Texas Health Science Center at San Antonio conferred 119; Baylor College of Medicine conferred 134; The University of Texas Medical Branch at Galveston conferred 180; and Southwestern Medical School at The University of Texas Heealth Science Center at Dallas conferred 152.

Fifty-five percent of the 1977 graduates plan to enter primary care for graduate medical education. Graduates planning to go into primary care training including fields of family practice, general internal medicine, obstetrics/gynecology, and pediatrics include 24 from Texas Tech; 27 from the Medical School at The University of Texas Health Science Center at Houston; 48 from the Medical School at The University of Texas Health Science Center at San Antonio; 83 from the Baylor College of Medicine; 108 from The University of Texas Medical Branch; and 81 from Southwestern Medical School in Dallas.

More than 15,000 MD degrees have been granted by Texas medical schools. Texas Tech University School of Medicine has now graduated 153 students; the Medical School at The University of Texas Health Science Center at Houston 192; the Medical School at The University of Texas Health Science Center at San Antonio 681; Baylor College of Medicine 4,663; The University of Texas Medical Branch 7,033; and Southwestern Medical School in Dallas 3,120.

Texas newest medical school, Texas A&M University College of Medicine, will accept its first class in Fall 1977.

TMA will sponsor county medical society executives conference

The Texas Medical Association will sponsor the 1977 Conference of County Medical Society Executives Aug 5 and 6, 1977 in Austin.

The conference will provide information on public relations and public service programs of the county medical society; the financial aspects of running a county medical society; peer review, discipline and the impaired physician; membership programs; and an update on TMA policies and priorities.

The conference will also include special meetings for county societies with larger and smaller staffs.

MD DEGREES CONFERRED BY TEXAS MEDICAL SCHOOLS, 1977*

	Male graduates	Female graduates	Total graduates	Graduates going into primary care for graduate medical education
Texas Tech University School of Medicine	32	13	45	24
Medical School, University of Texas Health Science Center at Houston	38	6	44	27
Medical School, University of Texas Health Science Center at San Antonio	100	19	119	48
Baylor College of Medicine	114	20	134	83
University of Texas Medical Branch	147	33	180	108
Southwestern Medical School, University of Texas Health Science Center at Dallas	134	18	152	81
	565	109	674	371

*Source: Texas medical schools

DOCTORS ARE TALKING ABOUT THE PRACTICAL WAY TO LOWER CHOLESTEROL

Choloxin®
(Sodium Dextrothyroxine)

nd for good reasons. Diet alone doesn't lways work. CHOLOXIN® (sodium extrothyroxine) has proved itself to be n effective cholesterol lowering adjunct to iet in euthyroid, non-cardiac patients. It has ndergone ten years of clinical trials and eight ears of practice. The clinical trials consisted f 337 clinical studies involving over 3,000 ypercholesterolemic non-cardiac patients. It is mong the most thoroughly evaluated drugs ver presented to physicians.

ractical, too, is the one-tablet-a-day dosage egimen. It encourages patient cooperation, and 's economical for long-term therapy.

CHOLOXIN (sodium dextrothyroxine) lowers cholesterol 15% to 35%, and keeps it down with most patients. *(Data on file, Flint Laboratories).*

Interested in receiving more information about lipid lowering? Write us or contact your Flint representative. We'll be glad to supply you with a complete product portfolio and samples for your evaluation.

NOTE: See following page for full prescribing information.

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

Choloxin® (Sodium Dextrothyroxine)

Effectively Lowers Elevated Cholesterol With Convenient Once-A-Day Dosage

Four strengths 1, 2, 4, and 6 mg. are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below.

	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1.0-2.0 mg.	1.0-2.0 mg.	4.0-8.0 mg.	4.0-8.0 mg.
Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac	1.0 mg.	1.0 mg.	4.0 mg.	4.0 mg.

Choloxin®
(Sodium Dextrothyroxine)

Description

CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as D-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions

The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN (sodium dextrothyroxine) stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic end-products do not accumulate in the blood.

Indications

This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN (sodium dextrothyroxine) is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively, in patients with significant myocardial impairment. CHOLOXIN (sodium dextrothyroxine) dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications

The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease; history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings

CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN (sodium dextrothyroxine) is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN (sodium dextrothyroxine) is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN (sodium dextrothyroxine). As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN (sodium dextrothyroxine) than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN (sodium dextrothyroxine) in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may not be advisable or possible to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN (sodium dextrothyroxine) therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age

Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions

It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN (sodium dextrothyroxine) therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions

The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN (sodium dextrothyroxine); a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN (sodium dextrothyroxine) potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration

For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is approximately 0.1 mg (100 mcg) per kilogram. The initial daily dosage should be approximately 0.05 mg (50 mcg) per kilogram to be increased in up to 0.05 mg (50 mcg) per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied

CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES INC
Deerfield, Illinois 60015

August is Immunization Action month in Texas

August is Immunization Action Month in Texas. As part of a nationwide campaign to immunize all those in need of protection, the Texas Department of Health Resources is leading the Immunization Action Month, aided by Mrs Dolph Briscoe's First Lady's Volunteer Program.

The Texas Medical Association House of Delegates has endorsed the goals of Immunization Action Month and pledged continued support as a member of the Immunization Action Month Steering Committee.

The action came at TMA Annual Session in Houston in May.

While all immunizations will be stressed during the campaign, the theme of this year's program is "Immunization Isn't Just Kid Stuff."

During August special efforts will be made by the Texas Department of Health Resources in child care institutions across Texas to bring immunization levels up among children attending these centers.

Texas Department of Public Welfare personnel will be instrumental in getting information to child care centers and in notifying welfare recipients of the need for immunization.

Tuberculosis cases drop 17.9% since 1969

Since the introduction of anti-tuberculosis drugs in the 1950's, the reduction in mortality has accelerated as fewer new cases occur. Concurrently with the decrease in deaths, there has been a decrease in the incidence of the disease and the average duration of hospitalization and as a result, a decrease in the number of hospital beds required, according to the Texas Department of Health Resources.

The reduction in the incidence of tuberculosis since 1969 has been 17.9%, from 2,988 to 2,454 cases. In terms of rate, the reduction has been more dramatic, from 26.8 cases per 100,000 to 19.7 cases per 100,000, or 26.5%. Regardless of the rate, the workload is still in terms of actual cases, and the actual cases are more than 2,000.

The dramatic decrease in the number of hospital beds occupied by tuberculosis patients has not been due to dramatic decrease in the incidence of the disease, says the Texas Department of Health Resources. The decrease is almost entirely attributable to the decreased length of hospital stay which has accompanied the development and use of specific anti-tuberculosis drugs.

From an average of 263 days per patient in 1965, the duration has dropped to 65 days. This is not to say that there are not advanced, complicated or deteriorated cases of tuberculosis which require prolonged periods of hospitalization extending to a year or more. These cases generally end up in the Texas State Chest Hospitals.

Tuberculosis will be a significant, albeit decreasing health problem in Texas for some years to come, particularly in specific geographical areas and/or in specific racial or ethnic groups, concludes the Texas Department of Health Resources.

TUBERCULOSIS INCIDENCE
By Public Health Region — 1976

Region	New Cases	Rate/100,000 pop.
1	18	5.3
2	54	8.2
3	81	18.1
4	86	13.8
5	498	17.5
6	157	12.8
7	259	20.1
8	677	25.0
9	253	20.5
10	371	33.3
	2,454	

NEW CASES OF TUBERCULOSIS
By Age — 1976

Age	White	Spanish Surname	Black	Other
<5	26	74	27	3
5-14	19	50	27	9
15-24	39	122	39	15
25-44	230	218	171	49
45-64	419	210	158	21
65+	272	157	92	7
	1005	831	514	104

Source: Texas Department Of Health Resources

Medicaid doctors work harder and earn less, AMA reports

Medicaid doctors may work harder and earn less money than physicians who treat relatively few Medicaid patients, an American Medical Association study reveals.

An analysis of data from the AMA's Tenth Periodic Survey of Physicians, a random sample of 5,288 physicians practicing in the United States, determined that physicians with a higher proportion of Medicaid-eligible patients in their practices earned an average of $51,283 in 1974, while physicians treating fewer Medicaid-eligible patients had an average net income of $53,142.

Also, physicians with high Medicaid-eligible practices reported an average of 139.6 patient visits per week, while doctors seeing few Medicaid-eligible patients averaged 128 visits per week.

The statistics are contained in the new 1977 edition of *Profile of Medical Practice,* which together with the new 1977 edition of a companion book, *Reference Data on the Socioeconomic Issues of Health,* serve as reference guides.

A comparison of average fees charged for four basic procedures shows that doctors treating more Medicaid-eligible patients charge lower fees than do physicians with fewer Medicaid-eligible patients. The initial office visit charge of the Medicaid doctor, for instance, was $19.67 in 1975, while the fee for a first office visit of other doctors was $22.27. For the annual physical examination, Medicaid doctors charged an average of $22.90, while others charged $25.67.

Physicians whose practices include a relatively greater proportion of Medicaid-eligible patients tend to be younger, are slightly less experienced, are more likely to be graduates of foreign medical schools, and are less likely to be board certified, the survey found.

On the average, Medicaid-eligible patients as a whole represent 16.7% of the patients of American doctors. But most of them are seen by a minority of the doctors. More than half of all physicians report Medicaid-eligible patients are less than 10% of their practice, and three-fourths of doctors report less than 20% of their patients are Medicaid-eligible. Five per cent of the doctors report having 50% or more Medicaid-eligible patients.

The two books are available from the Order Department, American Medical Association, 535 N Dearborn St., Chicago, IL 60610.

Causes of perinatal death tabulated in research study

The US infant mortality rate—regarded as one indicator of the health of the US population—has been improving steadily since World War II.

In 1975 infant mortality rate was 16.1 per 1,000 live births. This represents a 44.9% decrease from 1950, when the rate was 29.2.

But medical science is far from satisfied with the gains, and research continues on many fronts to try for even lower rates.

One such study—seeking to catalog the causes of deaths between 20 weeks of gestation and 28 days after birth—is reported in the July 18 *Journal of the American Medical Association* by Richard L. Naeye, MD, of Pennsylvania State University College of Medicine, Hershey. Dr Naeye reports findings of the Collaborative Perinatal Project organized by the National Institute of Neurological and Communicative Disorders and Stroke.

The study sought to identify underlying causes of death in 53,518 pregnancies in the United States, in 12 university-affiliated hospitals in different regions between 1959 and 1966. Autopsies were performed on some of the infants, and placental examinations on some two-thirds.

The leading cause of death (17%) was acute amniotic fluid infection, causing pneumonia in the unborn or newborn, says Dr Naeye. Second leading cause (11%) was premature detachment of the placenta prior to birth. Premature rupture of the membrane caused 10% of the deaths, and 9% were attributed to inherited defects. A variety of causes were assigned in the others.

Three-fourths of the deaths were due to disorders that at present are so poorly understood that it is not clear how they can be prevented, he points out.

The trend of decreasing deaths is certain to continue "if we learn more about the pathogenesis of the pertinent disorders and develop specific means to prevent them," Dr Naeye concluded.

AMA accredits Baylor center for continuing education

The American Medical Association Council on Medical Education has accredited Baylor University Medical Center, Dallas, for continuing medical education for four years. A certificate of accreditation will be presented during the September meeting of the Texas Medical Association Committee on Continuing Education.

The accreditation, which makes Baylor eligible to offer programs for Category 1 credit under the AMA Physician's Recognition Award, was based on recommendations from the TMA Committee on Continuing Education and the AMA Advisory Committee on Continuing Medical Education. Three representatives of TMA's Committee on Continuing Education surveyed Baylor's continuing medical education (CME) facilities April 6, 1977. The committee representatives also reviewed continuing education objectives, procedures, and policy.

Baylor University Medical Center is a community hospital affiliated with The University of Texas Health Science Center at Dallas. Baylor and the Health Science Center cosponsor the A. Webb Roberts Center for Continuing Education in the Health Sciences. Baylor has been involved in CME activities since 1971, and also offers education programs for graduate medical students, medical administrators, medical educators, allied heath and nursing personnel, and the lay public.

The center's program includes objectives to promote an appreciation for education of the health professional as a lifelong process that must undergo periodic review to remain relevant to the needs of the practitioner and the patient; to solicit recommendations about course content from professional health groups when courses are planned; to coordinate the development and evaluation of methods to improve the efficiency and effectiveness of continuing education; to disseminate to appropriate groups information about continuing education programs offered through the A. Webb Roberts Center; to strengthen and expand programs which make available teams of personnel to speak to county medical societies and nursing institutes; and to coordinate and arrange preceptorships that allow qualified individuals to spend time in participating institutions.

Because the number of organizations requesting surveys for accreditation for continuing medical education has been large, the AMA Council on Medical Education has asked state medical associations to survey institutions within their state which offer locally oriented continuing medical educational programs.

The AMA has approved TMA as an accrediting agent to conduct surveys of institutions and organizations in Texas. Baylor is the third institution to be accredited since a TMA study program was initiated in 1975. M. D. Anderson Hospital and Tumor Institute, Houston, was accredited in 1976, and Dolly Vinsant Memorial Hospital, a 59-bed facility in San Benito, Tex, was accredited earlier this year.

To help interested institutions and organizations prepare for a survey, the Committee on Continuing Education has developed a set of Guidelines for Accrediting Continuing Medical Education Programs in Texas. The Guidelines and an application for accreditation can be obtained from the Committee on Continuing Education, 1905 N Lamar Blvd, Austin 78705.

Continuing education directory will be published in December

Texas Medicine has announced plans for its eighth annual *Texas Continuing Education Directory for Physicians.*

The directory will contain courses designed specifically for physicians and will be published in late December 1977. In addition, the directory will carry a listing of medical meetings scheduled during the year.

Hospitals, schools, medical societies, and others wishing to have courses and meetings for physicians included in the 1978 directory should submit the information by September 15 to *Texas Medicine*, 1905 N Lamar Blvd, Austin 78705.

Coming next month

Scientific articles scheduled for publication in September are on proper use of antibiotics, improved continuing education through decentralized family physician education, computed cranial tomography, cloacogenic transitional carcinoma of the anus, and suction catheter technique.

You Deserve the Best Treatment You Can Prescribe for Yourself, Doctor!

The Great Getaway

Travel Medical Seminar for all Members, Families & Friends of TEXAS MEDICAL ASSOCIATION

Mark your calendar for the week of December 5 thru 10! That's the week you should be in Nassau for The Great Getaway from stress, strain and patient demands, Doctor!

You'll have six perfect days and five fabulous nights on idyllic Paradise Island to do as you please. Stroll the beaches. Enjoy the exotic beauty and beauties. Luxuriate in the plush ease of Britannia Beach Hotel. Sample the superb cuisine. Rest, relax.

If you haven't yet returned the reservation form in the colorful brochure sent you about this exciting Nassau escape for members of TMA, do it now, before you forget! If yours went astray, write or call for another. You deserve The Great Getaway!

Flights, hotel, breakfasts and dinners, transfers, tips, travel director and insurance, all at the charter price of $562 per person, double occupancy.

Phone 512-477-6704

Texas Medical Association
1801 North Lamar Boulevard
Austin, Texas 78701

Ohio consumers perceive greed as motivation for malpractice claims

Greed or desire to get something for nothing is perceived by Ohio consumers as the primary motivation behind the skyrocketing number of malpractice claims, according to a survey conducted by two Ohio State University professors.

Their survey, in which a random sample of 1,500 Ohioans were interviewed, was part of a major research project launched in 1976 by Roger Blackwell, PhD, and W. Wayne Talarzyk, PhD, professors of Consumer Behavior. The purpose of the study, made possible by a grant from the Malpractice Research Fund of the Ohio State Medical Association, was to assess the attitudes and behaviors of consumers concerning health care and physicians with special emphasis being placed on evaluating consumer support for various possible solutions to the malpractice problem.

They asked such questions as: How do you select a doctor? How do you rate your personal physician and health care in general? What is your feeling about the charges you pay your doctor? What do you believe are the causes for the increased cost of malpractice insurance, and what do you feel can be done to solve this problem?

For further information, contact the Ohio State Medical Association Department of Communications, 600 S High St, Columbus, Ohio, 43215.

August 1 is deadline for entering Texas Medicine awards

The deadline for entering the 12th annual *Texas Medicine* awards for excellence in scientific writing by a medical student, resident, or young practicing physician is August 1, 1977.

Two $250 awards will be offered for the outstanding entries in each category: Category A for a paper written in a training situation by a Texas student, graduate student, resident, or fellow under age 35, and Category B for a paper written by any Texas physician under age 35 not in a training position.

Articles must deal with a subject within the realm of the basic sciences or clinical medicine and must be original and unpublished.

The criteria for judging will be excellence of scientific work and competence in the writing craft. In addition to the monetary awards to the authors, the winning articles will be published in *Texas Medicine*.

For further information contact the *Texas Medicine* Department, 1905 N Lamar Blvd, Austin, 78705.

TDHR reports case of Type I paralytic polio

The Texas Department of Health Resources (TDHR) has reported laboratory confirmation of a case of Type I paralytic polio in a 23-month old child who resides in a Texas county along the Mexican border.

Although the child has a history of frequent and recent travel to Mexico where cases are occurring, the exact source of the infection has not been verified. The child had received no inoculations against polio.

TDHR urges physicians to remind parents and guardians of the importance and urgency of early polio immunizations for their children.

Oral polio vaccine is recommended for young Texans at ages 2, 4, and 6 months, with boosters between 12 to 18 months of age and after the fourth birthday, prior to entry into kindergarten or school.

For more information contact the Texas Department of Health Resources, Austin.

FDA is considering total saccharin ban

Although Congress is moving to put off action by the Food and Drug Administration (FDA) against saccharin, the FDA ban, when it comes, may be broader than originally proposed, reports the *American Medical News*.

In April, when the saccharin controversy blew up, the FDA said it would consider allowing saccharin to be marketed as an over-the-counter drug and permit its use in pharmaceuticals.

However, because of a recent Canadian epidemiological study linking saccharin consumption with bladder cancer in males, the FDA may take a harder line.

FDA Commissioner Donald Kennedy, PhD, told a House health subcommittee that the agency is reconsidering its original proposal and may instead propose a total ban.

San Antonio becomes atherosclerosis research center

San Antonio will become a major center for research in atherosclerosis as a result of a five-year $4.9 million grant for cooperative projects to be conducted in the city's three major research institutions.

The National Health, Lung and Blood Institute awarded the grant to the University of Texas Health Science Center at San Antonio for a Specialized Center of Research (SCOR) in Arteriosclerosis with Henry McGill, MD, professor of pathology, as principal investigator.

The San Antonio project is the only SCOR in Texas, and one of only eight in the nation funded for the next five years.

Texas legislation exempts syringes from sales tax

A bill passed by the 65th Legislature exempts from the sales tax all syringes and hypodermic needles used for medical purposes.

Currently, only syringes and hypodermic needles used for administering insulin are exempt from the tax.

SB 110, which becomes effective August 29, extends the exemption to all syringes and hypodermic needles used for medical purposes, according to Bob Bullock, Texas Comptroller of Public Accounts.

The syringes and hypodermic needles need not be sold on prescription to be exempt, and no exemption certificate is required, Bullock said.

For further information contact Bob Bullock, Comptroller of Public Accounts, LBJ State Office Bldg, Austin, 78774.

AMA prepares reference kits for high school debate teams

Reference kits containing articles on malpractice, national health insurance, and national health planning are being prepared by the American Medical Association for use as background information by high school student debate teams.

The topics will be debated by local high schools in the 1977-1978 school year. For more information write the AMA, 535 North Dearborn Street, Chicago, Illinois, 60610.

Investment performance for TMA Members' Retirement Plan and Trust

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1977 Through 6/30	3 Years Ended 12/31/76	5 Years Ended 12/31/76	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	—1.4%	− 9.3%	− 8.3%	1.7%
Loomis-Sayles Mutual Fund	—5.8%	− 1.6%	− 4.4%	3.7%
Mercantile Bank Equity Fund	—5.8%	+ 5.9%	−17.8%	4.0%
Mercantile Bank Fixed Income Fund	—1.0%	+ 0.2%	− 5.5%	7.3%
T Rowe Price Growth Stock Fund	—9.4%	− 2.6%	−16.6%	2.2%
T Rowe Price New Income Fund	—0.3%	+ 2.7%	N/A	7.7%
Stein Roe & Farnham Balanced Fund	—5.9%	− 0.5%	− 2.7%	3.3%
Standard & Poor 500 Stock Average	—6.5%	+10.4%	+ 5.3%	——
Dow Jones Industrial Average	—8.8%	+18.1%	+12.9%	——

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber, Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

TEXAS: PROFESSIONAL LIABILITY INSURANCE. Gov Dolph Briscoe signed HB 1048, the Medical Professional Liability Insurance Act, June 16. The bill becomes effective Aug 29, 1977. The new bill provides 60 days notice prior to filing suit, places a $500,000 limit on awards for damages other than expenses, and increases the power of the Texas State Board of Medical Examiners.

WASHINGTON: MANDATORY BALANCED BUDGET. Sen Herman Talmadge (D-Ga), has introduced a Senate Joint Resolution proposing a mandatory balanced federal budget. Sen Talmadge has proposed that the US Constitution should be amended to provide that, except in a time of war or extraordinary national economic emergency declared by Congress, the aggregate expenditures of the federal government shall not exceed the net amount of its revenues in any fiscal year. In his statement Sen Talmadge said, "I do not believe Congress will ever balance the budget until it is made to do so. I propose that we throw away the key to the Treasury, and that we stop the run on the taxpayer's money. We cannot continue to spend money we do not have on programs we do not need in the vain hope of being all things to all people, both at home and abroad."

WASHINGTON: US SURGEON GENERAL. Julius Richmond, MD, the newly appointed Assistant Secretary for Health at the HEW Department, also will bear the title of US Surgeon General. This post hasn't been filled for several years.

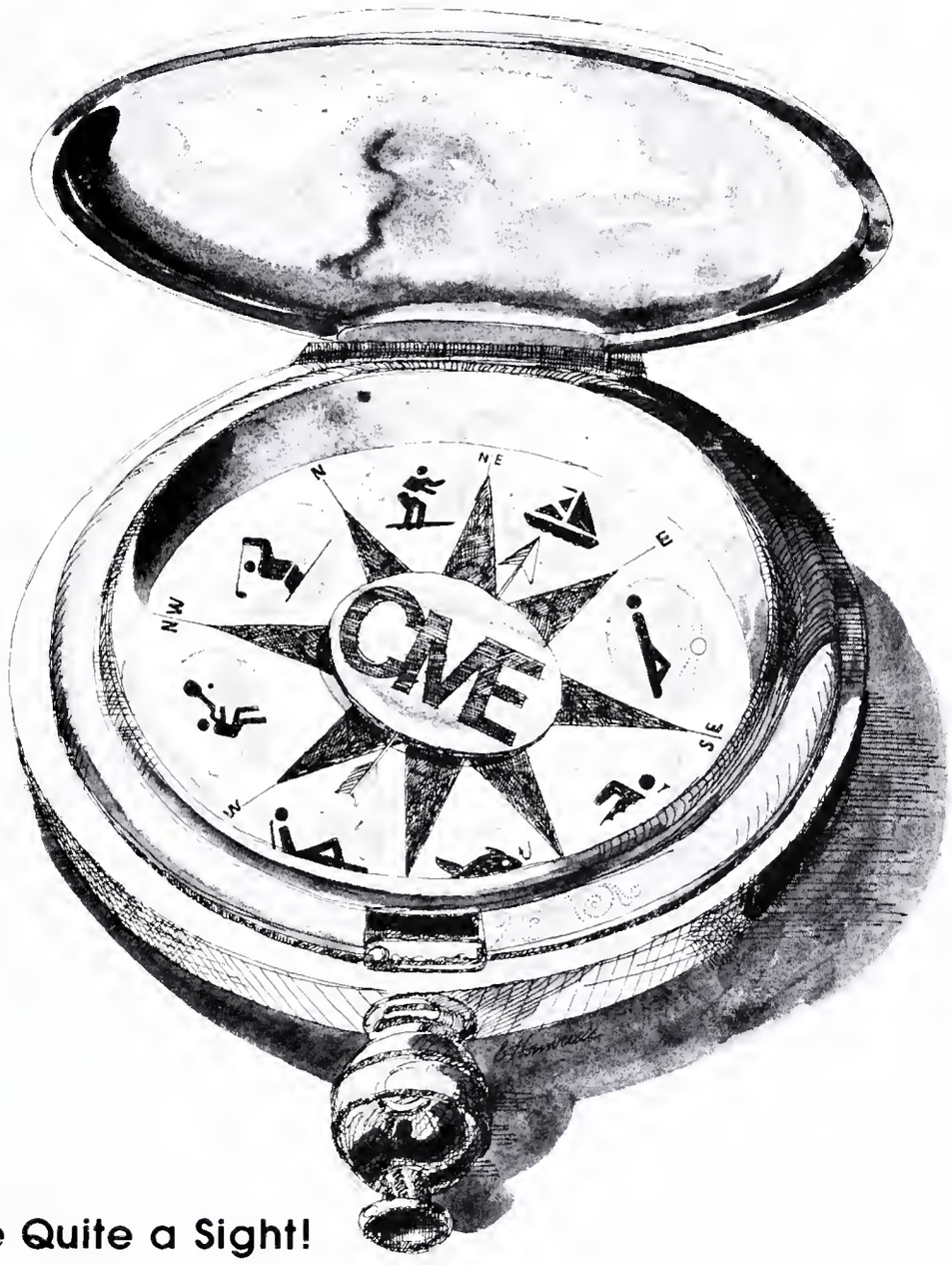
WASHINGTON: OFFICE OF INSPECTOR GENERAL. In an effort to boost the new Office of Inspector General, HEW Secretary Califano has charged that fraud and abuse by physicians and pharmacists in the Medicaid program "is a serious problem." He said "this conclusion emerges from an innovative, systematic two-month-old investigative effort being conducted by HEW's new Inspector General, working in cooperation with the new Health Care Financing Administration." Califano said that through computers programmed to flag suspicious cases in state Medicaid files, 172 cases have been identified involving "what appears to be the worst physician and pharmacist offenders against the Medicaid system." He did not release any names. The 172 cases warrant further investigation and may lead to prosecution, Califano said.

WASHINGTON: VA HOSPITALS. A report by the National Academy of Sciences recommends that the VA hospital system be melded into the private sector, and that the hospitals are now being used to care for those who do not require VA hospital care. The 300 page report, produced by the National Academy of Sciences under a contract with the VA, acknowledges that present VA medical facilities are providing adequate care, but verifies numerous concerns raised by other reports about the system—including inappropriate use of VA beds, facilities, and services such as underutilized surgical, kidney dialysis and transplant programs. The report will be the subject of Congressional hearings this fall.

HAWAII: MALPRACTICE INSURANCE. Hawaii's 1976 law requiring all physicians to carry malpractice insurance and to participate in a state patients' compensation fund has been repealed by the state legislature. Gov George Ariyoshi signed into law a bill eliminating the mandatory insurance provision of Hawaii's medical malpractice law. The new measure makes many other changes in the old statute, including the elimination of the arbitrary limit on attorneys' fees in malpractice cases.

WASHINGTON: NATIONAL HEALTH INSURANCE. Renewed prospects of Administration activity next year on National Health Insurance (NHI) have stirred Congressional interest in the issue. At last count 22 lawmakers from both parties have co-sponsored the AMA's comprehensive health insurance plan for all, bringing to 30 the number of Senators and Representatives who have backed the proposal officially. Early next year, the Carter Administration will submit its own NHI plan.

AMA Points the Way to Learning and Leisure



CME Sites Are Quite a Sight!

Enjoy a picturesque change of pace while you earn postgraduate credits! In 1977, the AMA is holding four of its 15 Continuing Medical Education Meetings at some of America's most beautiful resorts. Morning hours are devoted to study, and afternoons are reserved for your favorite recreational pursuits. Depending on the facilities available, you can play a round of golf or several sets of tennis, go boating or fishing, swim, surf, or go horseback riding. Choose from these scenic settings:

Tan-Tar-A Golf and Tennis Resort
Osage Beach, Missouri
Sept. 16-18

Sawmill Creek
Huron, Ohio
Oct. 7-9

The Homestead
Hot Springs, Virginia
Sept. 30-Oct. 2

Sheraton-Waikiki
Honolulu, Hawaii
Oct. 30-Nov. 4

FOR FURTHER INFORMATION, SEND IN THIS COUPON!

CME

Dept. of Meeting Services
American Medical Association
535 N. Dearborn
Chicago, IL 60610

Please send me further details on the AMA CME Meetings in:

☐ Osage Beach ☐ Huron
☐ Hot Springs ☐ Honolulu

Name _____

Address _____

City State Zip _____

Think you know all about asthma?

Then you should know all about TEDRAL.
It provides—

- □ rapid symptomatic relief, as well as prophylaxis
- □ β-ADRENERGIC ACTION THAT RELAXES BRONCHIAL SMOOTH MUSCLE
- □ α-ADRENERGIC ACTION THAT REDUCES BRONCHIAL EDEMA AND SECRETIONS
- □ synergistic action of ephedrine and theophylline for effective and prolonged bronchodilation
- □ dosage forms to meet individual patient needs

For asthma management...

Tedral® / Tedral® SA / Tedral® Elixir

Each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer), 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer); and 25 mg phenobarbital in the immediate release layer.

SUSTAINED ACTION

Each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine HCl, and 2 mg phenobarbital; the alcohol content is 15%.

WARNER/CHILCOTT
Division, Warner-Lambert Company
Morris Plains, New Jersey 07950

T-GP-74-B/W

TEDRAL®

TEDRAL® SA Sustained Action

TEDRAL® Elixir

CAUTION: Federal law prohibits dispensing Tedral SA without prescription.

Description. Tedral: each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Tedral SA: each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer); 25 mg phenobarbital in the immediate release layer.

Tedral Elixir: each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine hydrochloride, and 2 mg phenobarbital; the alcohol content is 15%.

Indications. Tedral, Tedral SA, and Tedral Elixir are indicated for the symptomatic relief of bronchial asthma, asthmatic bronchitis, and other bronchospastic disorders. They may also be used prophylactically to abort or minimize asthmatic attacks and are of value in managing occasional, seasonal or perennial asthma.

Tedral SA (Sustained Action) offers the convenience of b.i.d. dosage.

Tedral Elixir is convenient for persons who may have difficulty in swallowing tablets.

These Tedral formulations are adjuncts in the total management of the asthmatic patient. Acute or severe asthmatic attacks may necessitate supplemental therapy with other drugs by inhalation or other parenteral routes.

Contraindications. Sensitivity to any of the ingredients; porphyria.

Warnings. Drowsiness may occur. PHENOBARBITAL MAY BE HABIT-FORMING.

Precautions. Use with caution in the presence of cardiovascular disease, severe hypertension, hyperthyroidism, prostatic hypertrophy, or glaucoma.

Adverse Reactions. Mild epigastric distress, palpitation, tremulousness, insomnia, difficulty of micturition, and CNS stimulation have been reported.

Average Dosage. *Prophylactic or Therapeutic.*

Tedral: *Adults*—One or two tablets every 4 hours. *Children*—(Over 60 lb) one-half the adult dose.

Tedral SA: *Adults*—One tablet on arising and one tablet 12 hours later. Tablets should not be chewed. *Children*—Not established for children under 12.

Tedral Elixir: Note: One teaspoonful is equivalent to *one-quarter* Tedral tablet. *Children*—One teaspoonful per 30 lb body weight, every 4-6 hours, unless prescribed otherwise by physician. Should be given to children under 2 years of age only with extreme caution. *Adults*—One to two tablespoonfuls every four hours.

Supplied. Tedral: White, uncoated scored tablets in bottles of 24 (N 0047-0230-24), 100 (N 0047-0230-51) and 1000 (N 0047-0230-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0230-11).

Tedral SA: Double-layered, uncoated, coral/mottled white tablets in bottles of 100 (N 0047-0231-51) and 1000 (N 0047-0231-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0231-11).

Tedral Elixir: Dark red and cherry-flavored in 474 ml (16 fl oz) bottles (N 0047-0242-16).

STORE BETWEEN 59° and 86°F (15° and 30°C).

Full information is available on request.

PARK NORTH GENERAL HOSPITAL

4330 Vance Jackson
San Antonio, Texas 78230
512/341/5131

A private 100-bed patient-oriented hospital offering general medical/surgical as well as comprehensive mental health services. Serving San Antonio and other Texas communities with dedicated professionalism.

A Blue Cross/Medicare/Medicaid approved hospital

For more information contact:
Manuel L. English, Ph.D.
Administrator

Bank Financing for Physicians

We specialize in equipment leasing and financing, unsecured loans and lines of credit to Physicians And we handle it all by mail.

Unsecured loans with optional dollar amounts (to $10,000), optional payment schedules. Equipment leasing to give you tax advantages, restore operating capital, convert unused depreciation to cash. And lines of credit to provide for future cash needs.

We charge tax deductible bank rates. You won't spend any of your valuable time at your bank, and you'll reserve your regular bank credit for times when you really need it.

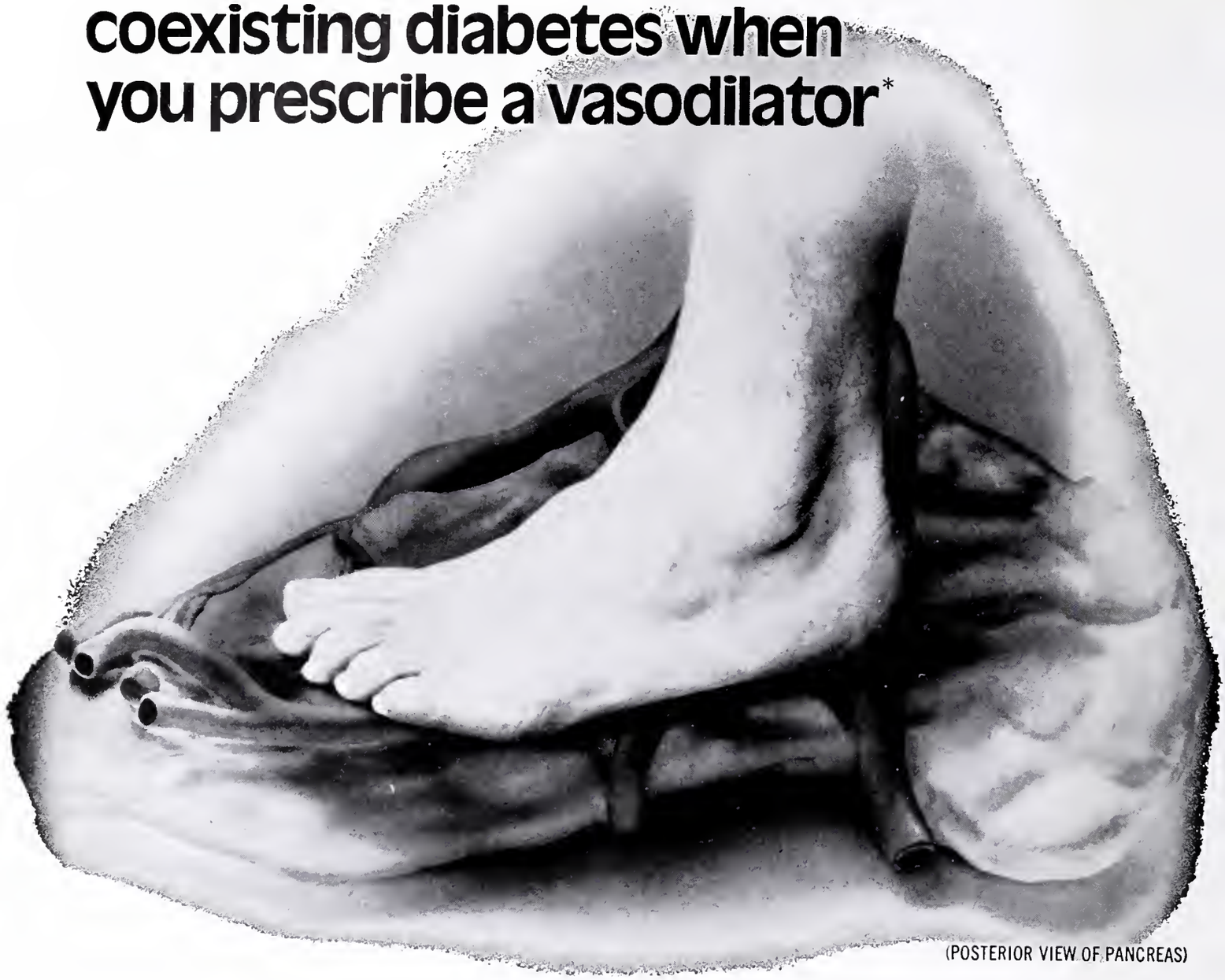
For further information, complete and mail this coupon today. I want to know more about:

__ Unsecured Loans __ Sale & Lease Back Plans
__ A Line of Credit __ Lease-Purchase Plans
__ Equipment Leasing __ Equipment Financing
__ Other: _____

Dr. _____ Phone _____
Address _____
City _____ State _____ Zip _____

Professional Services Division
TEXAS BANK AND TRUST COMPANY
P. O. Box 101 Jacksonville, Texas 75766

consider the effect on coexisting diabetes when you prescribe a vasodilator*



(POSTERIOR VIEW OF PANCREAS)

no interference in the management of the diabetic patient has been reported with

VASODILAN®
(ISOXSUPRINE HCl)

the compatible vasodilator TABLETS, 20 mg.

*__Indications:__ Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

Mead Johnson LABORATORIES

© 1977, MEAD JOHNSON & COMPANY, EVANSVILLE, INDIANA 47721 U.S.A. MJL5-4117R1

CONTINUING EDUCATION COURSES

AUGUST

Cardiovascular Disease

Title: Tutorials in the Tetons: Cardiac Emergencies (Third Annual)
Sponsors: American College of Cardiology; Cardiovascular Center, University of Nebraska Medical Center, Omaha, Neb
Location of Course: Jackson Lake Lodge, Grand Teton National Park, Moran, Wyo
Dates: Aug 21-23, 1977
Fee: American College of Cardiology members, $150; Nonmembers, $175
Credit: 12 hours, Category 1, AMA Physician's Recognition Award; State Board of Education, Maryland
Contact: Miss Mary Anne McInerny, Director, Extramural Programs, Division of Continuing Education, American College of Cardiology, 9650 Rockville Pike, Bethesda, Md 20014

Dermatology

Title: Office Dermatology
Sponsors: American Academy of Dermatology, Evanston, Ill; Colby College, Waterville, Me
Location of Course: Colby College, Waterville, Me
Dates: Aug 3-6, 1977
Fee: $150
Designed For: General practitioners
Credit: 15 hours, Category 1, AMA Physician's Recognition Award
Contact: Department of Continuing Medical Education, American Academy of Dermatology, 820 Davis St, Evanston, Ill 60201

Gastroenterology

Title: Practical Aspects of Diagnosis and Management of Diseases of the Digestive Tract
Sponsor: Office of Continuing Education, Baylor College of Medicine, Houston
Location of Course: Marriott Motor Hotel, Houston
Dates: Aug 26-27, 1977
Fee: $150 (includes luncheons)
Credit: 17 hours, Category 1, AMA Physician's Recognition Award; AAFP credit requested
Contact: Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Pathology

Title: 19th Annual Postgraduate Course in Dermal Pathology
Sponsors: Division of Continuing Education, UT Health Science Center at Houston; UT System Cancer Center, M. D. Anderson Hospital and Tumor Institute, Houston; American Society of Dermatopathology
Location of Course: Houston
Dates: Aug 21-26, 1977
Duration: 5½ days
Credit: 38 hours, Category 1, AMA Physician's Recognition Award
Contact: Office of the Director, UT Health Science Center at Houston, Division of Continuing Education, Box 20367, Houston 77025

Urology

Title: Urology Oncology
Sponsors: UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute
Location of Course: UT System Cancer Center, Houston
Dates: Aug 4-5, 1977
Duration: 6 hours instruction per day; 12 total course hours
Fee: To be announced
Designed For: General practitioners; Specialists in Urology
Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Lecture, panel
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

SEPTEMBER

Emergency Care

Title: Trauma '77
Sponsor: UT Medical Branch, Galveston
Location of Course: Galveston (tentative)
Date: September 1977
Duration: Continuous; 8 hours instruction per day; 2½ days; Thursday-Saturday; 20 total course hours
Fee: $80 (tentative)
Designed For: General practitioners; Specialists in Emergency Care, Surgery
Enrollment: Minimum, 40; Maximum, 75
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar, television
Contact: NeKee McNulty, Assistant Director, Continuing Education Division, UT Medical Branch, Galveston 77550

Family Medicine

Title: Family Practice Recertification Review: What's New Since 1971
Sponsor: UT Health Science Center at San Antonio
Dates: Sept 30-Oct 2, 1977
Fee: $160
Credit: 16 hours, AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Contact: Continuing Education Services, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Gastroenterology

Title: Advances in Gastrointestinal Endoscopy II
Sponsors: UT Health Science Center at

Houston; Texas Society of Gastrointestinal Endoscopy
Location of Course: M.D. Anderson Hospital and Tumor Institute, Houston
Date: Sept 17, 1977
Duration: Continuous; 9 am-4 pm; 5 total course hours
Fee: To be announced
Designed For: Specialists in Endoscopy
Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: Blackford Memorial Lectures
Sponsors: Grayson County Medical Society, Denison; Mrs Clara Blackford Smith
Date: Sept 10, 1977
Duration: 7 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: AAFP
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: John D. Gleckler, MD, Chairman, Blackford Memorial Lectures Committee, 211 N Fannin Ave, Denison 75020

Malignant Disease

Title: Medical Oncology
Sponsors: UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute, Houston
Location of Course: M.D. Anderson Hospital and Tumor Institute, Houston
Date: September 1977
Duration: 3 days; 18 total course hours
Fee: To be announced
Designed For: General practitioners; Specialists in Oncology
Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Pediatrics

Title: 1977 Texas Pediatric Society Meeting
Sponsor: Texas Pediatric Society, Austin
Location of Course: Hilton Palacio del Rio Hotel, San Antonio
Dates: Sept 15-17, 1977
Duration: 9 am-5 pm Friday; 9 am-12 pm Saturday; 7 total course hours
Fee: Members, $30; Nonmembers, $40
Designed For: Specialists in Pediatrics
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: J. Thomas Fitch, MD, PA, District Chairman, Texas Pediatric Society, 341 E Hildebrand, San Antonio 78212

Title: Current Concepts in Pediatrics
Sponsor: Texas Tech University School of Medicine, Lubbock
Location of Course: Texas Tech University School of Medicine, Lubbock
Date: Sept 23, 1977
Duration: 5 total course hours
Fee: $50
Designed For: General practitioners; Specialists in Pediatrics
Teaching Methods: Audiovisual materials, lecture, open question, seminar
Contact: Roy C. Allen, EdD, Director, Educational Development and Continuing Education, Texas Tech University School of Medicine, Box 4569, Lubbock 79409

Other: Mental Health and Mental Retardation

Title: Mental Illness in Children
Sponsor: Texas Department of Mental Health and Mental Retardation; Office for Continuing Education, Texas Research Institute of Mental Sciences
Location of Course: Austin
Dates: Sept 9-10, 1977
Contact: Office of Medical Services Continuing Education, Texas Department of Mental Health and Mental Retardation, Box 12668, Capitol Station, Austin 78711

Other

Title: The Art of Negotiations
Sponsor: American Medical Association
Location of Course: Radisson South Hotel, 7800 Normandale Blvd, Bloomington, Minn
Dates: Sept 10-12, 1977
Fee: AMA members, Medical society staff members, $200; Nonmembers, $275
Credit: 22 hours, Category 2, AMA Physician's Recognition Award
Contact: AMA, Department of Negotiations, 535 N Dearborn St, Chicago 60610

Title: Group Relations in Health Care: An Experiential Conference to Explore Authority, Responsibility, and Organization in Health Care Delivery Systems
Sponsors: A. K. Rice Institute; Department of Psychiatry, Baylor College of Medicine, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Sept 30-Oct 2, 1977
Credit: Category 1, AMA Physician's Recognition Award
Contact: Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Promote your continuing education programs.

The staff of TEXAS MEDICINE currently is preparing the 1978 Texas Continuing Education Directory for Physicians. The directory will be mailed to all members of the Texas Medical Association in December to assist them in planning their 1978 continuing education schedule.

If your organization will have one or more continuing education programs during the coming year, you will want them listed. This directory will provide greater publicity to all courses which will be offered in Texas and stimulate greater participation in many programs.

Don't miss this opportunity to further promote your continuing education course. Time is limited, so write today for the questionnaire that must be filled out for each listing.

Complete and mail the form below and a questionnaire will be rushed to you. Do it now!

To: Mrs. Marilyn Baker, Executive Editor
TEXAS MEDICINE
1905 North Lamar Blvd., Austin, Texas 78705

Please send me the TMA Continuing Education Course questionnaire in order that my organization may be listed in the 1978 Texas Continuing Education Directory for Physicians.

Name of course _____

Dates _____

Sponsoring Organization _____

Name _____

Address _____

City _____ Zip _____

A "claims made" insurance policy may be the most expensive cheap insurance you ever bought.

We all know that you get what you pay for in this world and certainly the area of professional liability insurance is no exception.

Remember — all insurance rates are regulated by the government and the premiums must equate to the risk; i.e., the greater the protection provided, the higher the premium authorized.

So a low premium can mean only one thing . . . less coverage.

Why is the protection less with a "claims made" policy? The answer is simple. You are not covered under a "claims made" policy unless the claim is presented *during the life of the policy.* In medical malpractice this is often not the case due to the "long tail" of these type claims.

The Journal of Accountancy has warned its CPA readers of the danger of this type policy by pointing out that under a "claims made" policy "although timely notification of an occurrence is given to the carrier during the policy period, if no actual claim is asserted until the policy expires, the carrier may refuse indemnity."

To contrast, under an occurrence policy any act or omission during the policy period is insured *regardless* of when the actual claim is presented.

Even under the so-called "convertible claims made" policy you forfeit your past insurance when you leave the plan unless you are willing to pay up to two years premium in addition to your last annual payment.

This triple charge is hardly a bargain in anybody's book.

It is really as simple as this . . . You don't have a "claims made" policy on your home or your car so why would you want this lesser coverage on your most valuable asset — your medical practice?

It's time to get the protection you deserve — a tough, no-nonsense occurrence form policy. Call for your nearest ICA agent today at (713) 526-4863.

At ICA we know your concern is practicing medicine and our concern is protecting your practice.

INSURANCE CORPORATION OF AMERICA

Houston, Texas

A+AAAAA Reinsurance Provided

MEETINGS

NATIONAL JAIL CONFERENCE

The American Medical Association and the National Jail Association will present a National Jail Conference at the Marc Plaza Hotel, Milwaukee, Aug 21-22, 1977. The conference will be in conjunction with the Congress of Corrections. The program will open with an overview of the AMA jail project by Herbert C. Modlin, MD, chairman of the AMA National Advisory Committee to Improve Medical Care and Health Services in Correctional Institutions. The keynote address on the role of the court in upgrading medical care and health services in jails will be presented by M. Roland Nachman, chairman, Human Rights Commission on the Alabama Prison System. The AMA jail project is the result of a 1972 survey of jail facilities which showed a gross inadequacy of health and medical services throughout the country

Contact: AMA Jail Project, 535 N Dearborn St, Chicago 60610.

INTERNATIONAL CONFERENCE ON MEDICAL COMPUTING

The Second International Conference on Medical Computing, MEDINFO '77, will be held in Toronto, Aug 8-13, 1977. The conference will be sponsored by the American Medical Association, the Canadian Medical Association and the World Health Organization as a major activity of the International Federation for Information Processing.

Contact: Department of Computer Systems in Medicine, American Medical Association, 535 N Dearborn St, Chicago 60610.

WESTERN HEMISPHERE NUTRITION CONGRESS

The Fifth Western Hemisphere Nutrition Congress will be held Aug 15-18, 1977 in Quebec City. "Nutrition in Transition" will be the theme of the triennial congress, held under the auspices of the American Medical Association, American Institute of Nutrition, Nutrition Society of Canada, Sociedad Latinoamericana de Nutricion, and American Society for Clinical Nutrition. Dr Nevin S. Scrimshaw of Massachusetts Institute of Technology will present the ninth W.O. Atwater Memorial Lecture during the congress. Frank Maine, MD, Wellington, member of the Canadian parliament, will be the speaker for the congress banquet. General sessions will cover such subjects as nutrition in transition, evaluation of nutrition intervention programs, technological aspects of fats, and others

Contact: Department of Foods and Nutrition, American Medical Association, 535 N Dearborn St, Chicago 60610.

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF DERMATOLOGY, course in Office Dermatology, Colby College, Waterville, Me, Aug 3-6, 1977. Designed for primary care physicians who treat patients with dermatological disease. Course will emphasize correct diagnosis, teatment of most common skin disorders. Overview of new advances in dermatology, current concepts in diagnosis and patient care. Teaching format includes short and in-depth presentations, motion pictures, panel discussions, question-answer sessions. Provides background with which to diagnose, treat acne vulgaris, wats, pigmented tumors, viral skin lesions, atopic dermatitis, sexually transmitted diseases. Self asessment to be individually scored on confidential basis. 15 hours, Catergory I, AMA Physician's Recognation Award. Registration fee, $150. Enrollment limited to first 150 registrants. Contact: Department of Continuing Medical Education, American Academy of Dermatology, 820 Davis St, Evanston, Ill 60201.

AMERICAN COLLEGE OF CARDIOLOGY, Third Annual Tutorials in the Tetons: Cardiac Emergencies, Jackson Lake Lodge, Grand Teton National Park, Moran, Wyo, Aug 21-23, 1977. Program emphasizes systematic approach to patient with cardiac emergency and to unresponsive or refractory patient. New methods of diagnosis, management will be considered, including new drugs, equipment. Program objectives: (1) define clinical approach to cardiac emergencies; (2) review simple, complicated diagnostic techniques; (3) define management of various complications; (4) review preventive measures. 12 hours, Category 1, AMA Physician's Recognition Award. Registration fees: $150, members of American College of Cardiology; $175 nonmembers. Contact: Miss Mary Anne McInerny, Director, Extramural Programs, Division of Continuing Education, American College of Cardiology, 9650 Rockville Pike, Bethesda, Md 20014.

ASPEN MUSHROOM CONFERENCE, Hotel Jerome, Aspen, Colo, Aug 7-12, 1977. Mushroom toxicology course includes chemistry, chromatography of mushroom toxins. Medical, chemical, social aspects of hallucinogenic mushrooms aso to be presented. 25 hours, Category 1, AMA Physician's Recognition Award. Fees: General, $190; resident, $100; spouse, $100. Contact: Aspen Mushroom Conference, Beth Israel Hospital, 1601 Lowell Blvd, Denver 80204.

For other courses and symposia, see Continuing Education Courses, pp 31-32.

AUGUST

AMERICAN ASSOCIATION FOR RESPIRATORY THERAPY, Pajara Dunes, Calif, Aug 28, 1977. Robert R Weilacher, 7411 Hines Place, Dallas 75235.

AMERICAN COLLEGE OF SURGEONS, Big Sky, Mont, Aug 11-13, 1977. WE Reckling, Jr, MD, Sec-Treas, 1607 E 19th St, Cheyenne, Wyo 83001.

AMERICAN HOSPITAL ASSOCIATION, Atlanta, Aug 29-Sep 1, 1977. 840 N Lake Shore Dr, Chicago 60611.

AMERICAN MEDICAL ASSOCIATION, Fifth Western Hemisphere Nutrition Congress, Quebec City, Canada, Aug 15-18, 1977. Department of Foods and Nutrition, AMA, 535 N Dearborn St, Chicago 60610.

ASPEN MUSHROOM CONFERENCE, Aspen, Colo, Aug 7-12, 1977. Aspen Mushroom Conference, c/o Beth Israel Hospital, 1601 Lowell Blvd, Denver 80204.

INTERNATIONAL CONFERENCE ON MEDICAL COMPUTING, Toronto, Aug 8-13, 1977. Department of Computer Systems in Medicine, American Medical Association, 535 N Dearborn St, Chicago 60611.

INTERNATIONAL DOCTORS IN ALCOHOLICS ANONYMOUS, New York, Aug 4-7, 1977. LK Reed, MD, Sec-Treas, 1950 Volney Rd, Youngstown, Ohio 44511.

ROCKY MOUNTAIN RADIOLOGICAL SOCIETY, Denver, Aug 4-6, 1977. JM Grogan, MD, Sec-Treas, 4200 E Ninth Ave (C276), Denver 80262.

SOUTH DAKOTA STATE MEDICAL ASSOCIATION, Spearfish, SD, Aug 11-13, 1977. LH Amundson, MD, Sec-Treas, 3001 S Holly Ave, Sioux Falls, SD 57105

■ TEXAS PERINATAL ASSOCIATION, El Paso, Tex, August 1977. Clark M Hinkley, MD, Pres, 1801 Allen Parkway, Houston 77019.

WEST VIRGINIA STATE MEDICAL ASSOCIATION, White Sulphur Springs, WVa, Aug 24-27, 1977. CR Lewis, Exec Sec, Box 1031, Charleston, WVa 25324.

WORLD CONGRESS OF PSYCHIATRY, Honolulu, Aug 28-Sep 3, 1977. Ms R Torres, 1700 18th St NW, Washington, DC 20009.

WYOMING STATE MEDICAL SOCIETY, Moran, Wyo, Aug 30-Sep 2, 1977. RG Smith, Exec Sec, PO Drawer 4009, Cheyenne, Wyo 82001.

SEPTEMBER

AMERICAN ASSOCIATION OF ELECTROMYOGRAPHY AND ELECTRODIAGNOSIS, Salt Lake City, Sep 30-Oct 1, 1977. JL Melvin, MD, Sec-Treas, 10437 W Watertown Plank Rd, Box 7372, Milwaukee 53226.

■ AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, INC, STATE OF TEXAS, Austn, Tex, Sep 10-11, 1977. Mildred Banks, Sec, 4309 Ramsey Ave, Austin, Tex 78756.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Hot Springs, Va, Sep 8-10, 1977. GW Mitchell, Jr, MD, Sec, 171 Harrison Ave, Boston 02111.

AMERICAN ASSOCIATION FOR THE SURGERY OF TRAUMA, Detroit, Sep 15-17, 1977. JA Boswick, Jr, MD, Admn Officer, University of Colorado, 4200 E Ninth Ave, Denver 80220.

AMERICAN CANCER SOCIETY, NATIONAL CANCER INSTITUTE, National Conference on the Lymphomas and the Leukemias, New York, Sep 29-Oct 1, 1977. Sidney L Arje, MD, 777 Third Ave, New York 10017.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Hartford, Conn, Sep 10-11, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Lake of the Ozarks, Mo, Sep 16-18, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Chicago, Sep 24-25, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Hot Springs, Va, Sep 30-Oct 2, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Seminar on Negotiations, Bloomington, Minn, Sep 10-12, 1977. Department of Negotiations, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, Sep 27-Oct 1, 1977. Ms L Sablack, Exec Sec, 5272 River Rd, Suite 290, Bethesda, Md 20014.

AMERICAN ROENTGEN RAY SOCIETY, Boston, Sep 27-30, 1977. JF Martin, MD, Sec, 300 S Hawthorne Rd, Winston-Salem, NC 27103.

AMERICAN SOCIETY OF INTERNAL MEDICINE, Washington, DC, Sep 28-30, 1977. Exec Dir, 703 Market St #535, San Francisco 94103.

■ AMERICAN SOCIETY OF OPHTHALMOLOGIC AND OTOLARYNGOLOGIC ALLERGY, Dallas, Sep 30-Oct 1, 1977. WA Ward, MD, Sec-Treas, Bowman Gray School of Medicine, Winston-Salem, NC 27103.

INTERNATIONAL CONFERENCE ON RED CELL METABOLISM AND FUNCTION, Ann Arbor, Mich, Sep 14-17, 1977. GJ Brewer, MD, Department of Human Genetics, University of Michigan Medical School, Ann Arbor, Mich 48109.

KENTUCKY MEDICAL ASSOCIATION, Louisville, Sep 25-29, 1977. RG Cox, Exec Vice-pres, 3532 Ephraim McDowell Dr, Louisville 40205.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA, Washington, DC, Sep 15-16, 1977. FP Ferraraccio, Exec Sec, 2007 Eye St NW, Washington, DC 20006.

MID-CONTINENT PSYCHIATRIC ASSOCIATION, Oklahoma City, Sep 9-11, 1977. A Paredes, Sec-Treas, Box 26901, Oklahoma City 63190.

MONTANA MEDICAL ASSOCIATION, Missoula, Mont, Sep 29-Oct 1, 1977. GB Zins, Exec Dir, 2021 11th Ave, Helena, Mont 59601.

AMERICAN CANCER SOCIETY, National Conference on Human Values and Cancer, Chicago, Sep 7-9, 1977. American Cancer Society, Second National Conference on Human Values and Cancer, 777 Third Ave, New York 10017.

PAN AMERICAN MEDICAL WOMEN'S ALLIANCE, San Juan, Puerto Rico, Sep 1-6, 1977. Dr T Foster, Sec, 6417 Pelham St, San Jose, Calif 95123.

RADIOLOGY FOR FAMILY PRACTITIONERS, Santa Fe, NM, Sep 15-17, 1977. WJ Levy, MD, Sec, Symposia de Santa Fe, Box 5175, Santa Fe, NM 87502.

SOCIETY FOR PEDIATRIC RADIOLOGY, Boston, Sep 24-25, 1977. NT Griscom, MD, Sec-Treas, Department of Radiology, Children's Hospital Medical Center, 300 Longwood Ave, Boston 02115.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, El Paso, Tex, Sep 17-20, 1977. Donald C Jackson, 1901 N Lamar Blvd, Austin, Tex 78705.

■ TEXAS CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, San Antonio, Tex, Sep 12-14, 1977. George Pruett, MD, Pres, 730 N Main, B-112, San Antonio, Tex 78205.

■ TEXAS MEDICAL ASSOCIATION, Fall Conference, Austin, Tex, Sep 9-11, 1977. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.

UTAH STATE MEDICAL ASSOCIATION, Location to be announced, Sep 13-16, 1977. HW Brewster, Admn Officer, 42 S Fifth East St, Salt Lake City 84102.

OCTOBER

AMERICAN ACADEMY FOR CEREBRAL PALSY AND DEVELOPMENTAL MEDICINE, Atlanta, Oct 5-9, 1977. JE Bryan, Exec Sec, 1255 New Hampshire Ave, Washington, DC 20036.

■ AMERICAN ACADEMY OF CHILD PSYCHIATRY, Houston, Oct 19-21, 1977. VQ Bausch, Exec Dir, 1800 R St NW, Washington, DC 20009.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Las Vegas, Nev, Oct 10-13, 1977. R Tusken, Exec Dir, 1740 W 92nd St, Kansas City, Mo 64114.

■ AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Dallas, Oct 2-6, 1977. 15 Second St SW, Rochester, Minn 55901.

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, Bal Harbour, Miami, Fla, Oct 30-Nov 4, 1977. CC Herold, Exec Dir, 30 N Michigan Ave, Suite 922, Chicago 60602.

AMERICAN ACADEMY OF PSYCHIATRY AND THE LAW, New Orleans, Oct 20-23, 1977. WD Weitzel, MD, Department of Psychiatry, College of Medicine, University of Kentucky, Lexington, Ky 40506.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE, Anaheim, Calif, Oct 2-7, 1977. Joseph J Garvey, Exec Sec, 2317 W Jefferson, Joliet, Ill 60435.

AMERICAN ASSOCIATION OF PUBLIC HEALTH PHYSICIANS, Washington, DC, Oct 30-Nov 1, 1977. JV Sessums, Jr, MD, Sec-Treas, 1703 Ridgemont, Austin, Tex 78723.

AMERICAN ASSOCIATION FOR THE STUDY OF LIVER DISEASES, Chicago, Oct 31, 1977. MA Rothschild, MD, Sec-Treas, VA Hospital, First Ave at E 24th St, New York 10010.

AMERICAN CLINICAL AND CLIMATOLOGICAL ASSOCIATION, Colorado Springs, Colo, Oct 23-26, 1977. JE Wood, MD, Sec-Treas, Pennsylvania Hospital, Philadelphia 19107.

AMERICAN COLLEGE OF CHEST PHYSICIANS, Las Vegas, Nev, Oct 30-Nov 3, 1977. 911 Busse Highway, Park Ridge, Ill 60068.

AMERICAN COLLEGE OF GASTROENTEROLOGY, New Orleans, Oct 23-29, 1977. D Weiss, Exec Dir, 299 Broadway, New York 10007.

AMERICAN COLLEGE OF PREVENTIVE MEDICINE, Atlanta, Oct 30-31, 1977. W Bentley, Exec Dir, 801 Old Lancaster Rd, Bryn Mawr, Pa 19010.

■ AMERICAN COLLEGE OF SURGEONS, Dallas, Oct 17-21, 1977. CR Hanlon, Dir, 55 E Erie St, Chicago 60611.

■ AMERICAN COUNCIL OF OTOLARYNGOLOGY, Dallas, Oct 6, 1977. Harry W McCurdy, MD, FACS, Exec Dir, 1100 17th St, NW, Suite 602, Washington, DC 20036.

AMERICAN DENTAL ASSOCIATION, Miami, Oct 9-13, 1977. C Gordon Watson, DDS, 211 E Chicago Ave, Chicago 60611.

AMERICAN DIETETIC ASSOCIATION, Los Angeles, Oct 10-14, 1977. Clara Zempel, RD, 430 N Michigan Ave, Chicago 60611.

■ AMERICAN GROUP PRACTICE ASSOCIATION, Houston, Oct 5-8, 1977. WG Davis, MD, Exec Vice-pres, 20 S Quaker Lane, Box 949, Alexandria, Va 22313.

■ AMERICAN INSTITUTE OF ULTRASOUND IN MEDICINE, Dallas, Oct 29-Nov 4, 1977. D LaMaster, Mng Editor, Box 25606, Oklahoma City 73125.

AMA REGIONAL MEETING, Huron, Ohio, Oct 7-9, 1977. AMA, Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMA REGIONAL MEETING, Honolulu, Oct 30-Nov 3, 1977. AMA, Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMA SEMINAR ON NEGOTIATIONS, Atlanta, Oct 15-17, 1977. AMA, Department of Negotiations, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL RECORD ASSOCIATION, Atlanta, Oct 16-21, 1977. Mary-j Waterstraat, RRA, 875 N Michigan Ave, Chicago 60611.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, October 1977. L Sablack, Exec Sec, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN PHYSIOLOGICAL SOCIETY, St Louis, Oct 22-27, 1977. OE Reynolds, PhD, Exec Sec-Treas, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SCHOOL HEALTH ASSOCIATION, Atlanta, Oct 13-16, 1977. SJ Jerrick, Exec Dir, Box 708, ASHA National Office Bldg, Kent, Ohio 44240.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, New Orleans, Oct 15-19, 1977. JW Andes, Exec Sec, 515 Busse Highway, Park Ridge, Ill 60068.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, Atlanta, Oct 17-23, 1977. WF Hoffman, Jr, Exec Dir, 2400 E Devon Ave, Suite 218, Des Plaines, Ill 60018.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Las Vegas, Nev, Oct 20-28, 1977. DL Gilcrest, Exec Dir, 2100 W Harrison St, Chicago 60612.

AMERICAN SOCIETY OF MAXILLOFACIAL SURGEONS, San Francisco, Oct 30-Nov 4, 1977. CA Janda, MD, DDS, Sec, 120 Oakbrook Center Mall, Westchester, Ill 60153.

CENTRAL ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Biloxi, Miss, Oct 6-8, 1977. David G Anderson, MD, Sec-Treas, Women's Hospital, University of Michigan Medical Center, Ann Arbor, Mich 48109.

■ MEDICAL GROUP MANAGEMENT ASSOCIATION, Houston, Oct 9-14, 1977. RV Grant, PhD, Exec Dir, 4101 E Lousiana Ave, Denver 80222.

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO, Phoenix, Ariz, Oct 12-15, 1977. Lucy A Vernetti, MD, 333 W Thomas Rd, Suite 207, Phoenix, Ariz 85013.

NOVEMBER

AMERICAN ACADEMY OF PEDIATRICS, New York, Nov 5-10, 1977. Robert G Frazier, MD, Exec Officer, 1801 Hinman Ave, Evanston, Ill 60201.

AMERICAN ASSOCIATION OF BLOOD BANKS, Atlanta, Nov 11-16, 1977. Lois J James, Asstnt Exec Dir, 1828 L St, NW, Washington, DC 20036.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, New Orleans, Nov 9-13, 1977. Howard Silber, Exec Officer, Box 912, Omaha 68101.

AMERICAN CANCER SOCIETY, INC, New York, Nov 9-11, 1977. Lane W Adams, Exec Vice-pres, 777 Third Ave, New York 10017.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, San Francisco, Nov 8-10, 1977. Arthur Auer, Exec Officer, 3900 Capital City Blvd, Lansing, Mich 48906.

AMERICAN HEART ASSOCIATION, Miami, Nov 28-Dec 2, 1977. William W Moore, Exec Officer, 7320 Greenville Ave, Dallas 75231.

AMERICAN MEDICAL ASSOCIATION, 16th Natl Conference on Physicians and Schools, Chicago, Nov 10-11, 1977. Division of Scientific Activities/Department of Health Education, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL WOMEN'S ASSOCIATION, Denver, Nov 30-Dec 4, 1977. Lorraine Loesel, Exec Officer, 1740 Broadway, New York 10019.

AMERICAN SOCIETY OF CYTOLOGY, Toronto, Nov 1-5, 1977. Warren R Lang, MD, Sec-Treas, Health Sciences Center, 130 S Ninth St, Suite 10006, Philadelphia 19107.

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES, Washington, DC, Nov 27-Dec 1, 1977. 10605 Concord St, Suite 306, Kensington, Md 20795.

■ SOUTHERN MEDICAL ASSOCIATION, Section on Ophthalmology, Dallas, Nov 6-9, 1977. William H Coles, MD, Section Sec, Dept of Ophthalmology, 80 Barre St, Charleston, SC 29401.

■ TEXAS MEDICAL ASSOCIATION, House of Delegates, Austin, Tex, Nov 12-13, 1977. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.

DECEMBER

■ AMERICAN ACADEMY OF DERMATOLOGY, Dallas, Dec 3-8, 1977. Bradford W Claxton, Exec Dir, 820 Davis St, Evanston, Ill 60201.

AMERICAN ASSOCIATION OF GYNECOLOGICAL LAPAROSCOPISTS, San Francisco, Dec 7-11, 1977. Jordan M Phillips, Exec Officer, 11239 S Lakewood Blvd, Downey, Calif 90241.

■ AMERICAN COLLEGE OF CHEMOSURGERY, Dallas, December 1977. GR Mikhail, MD, Sec-Treas, 2 Elmsleigh Lane, Grosse Pointe, Mich 48230.

AMERICAN MEDICAL ASSOCIATION, Chicago, Dec 4-7, 1977. 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL TENNIS ASSOCIATION, Palm Springs, Calif, Dec 7-11, 1977. WJ Drake, Exec Dir, Box 183, Alton, Ill 62002.

SOUTHERN SURGICAL ASSOCIATION, Hot Springs, Va, Dec 5-7, 1977. WR Warren, MD, Sec, Emory University Hospital, Atlanta 30322.

■ SOUTHWESTERN GYNECOLOGY ASSEMBLY, Dallas, Dec 1-3, 1977. 3630 Noble Ave, Dallas 75204.

JANUARY

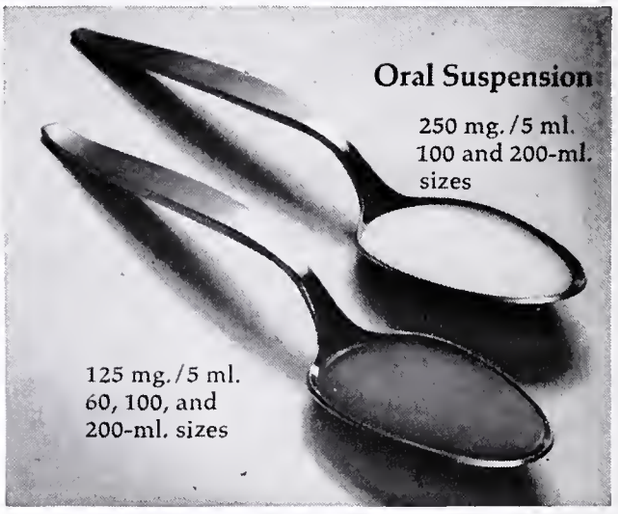
AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Bal Harbour, Fla, Jan 28-Feb 3, 1978. Ms M Trueblood, Sec, 6 N Michigan Ave, Chicago 60602.

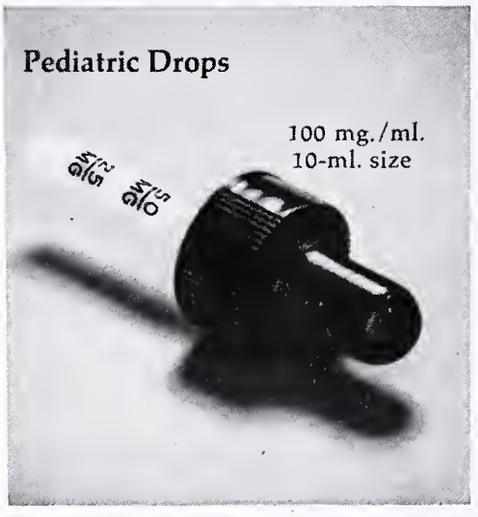
SOCIETY OF THORACIC SURGEONS, Orlando, Fla, Jan 23-25, 1978. 111 E Wacker Dr, Chicago, 60601.

■ TEXAS MEDICAL ASSOCIATION, Winter Conference, Austin, Tex, Jan 20-22, 1978. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.

■ UNITED CEREBRAL PALSY ASSOCIATION OF TEXAS, INC, Austin, Tex, Jan 14-15, 1978. San Jacinto Bldg, Suite 201, Ninth and San Jacinto, Austin, Tex 78701.

easy to take





Keflex®
cephalexin

Lilly

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

500738

Muscle biopsy histochemistry: a useful tool for evaluating patients who have neuromuscular disease

Bernard M. Patten, MD; Shin-Siung Jung, MD; Karam Mata, BS, BA

All that waddles is not dystrophy. Many waddling patients are being reclassified as having nemaline myopathy, central core, type 1 hypotrophy and many other newly delineated neuromuscular conditions. Correct classification is a necessary prelude to intelligent genetic counseling, accurate prognostication, and effective therapy. This article discusses the techniques of muscle biopsy histochemistry and gives some case examples with the biopsy results in each, and reviews our recent experience with 500 muscle biopsies.

A decade ago clinicians were not impressed with muscle biopsy as a diagnostic tool. The reason for this was that, in those days, the pathologist, more often than not, received in his laboratory a morsel from an unnamed muscle contracted into a ball after being dropped into fixative. The hematoxylin and eosin stains applied to the specimen would not highlight specific chemical abnormalities of individual muscle fibers and, therefore, definite statements about what was wrong with the muscle were hard to make.

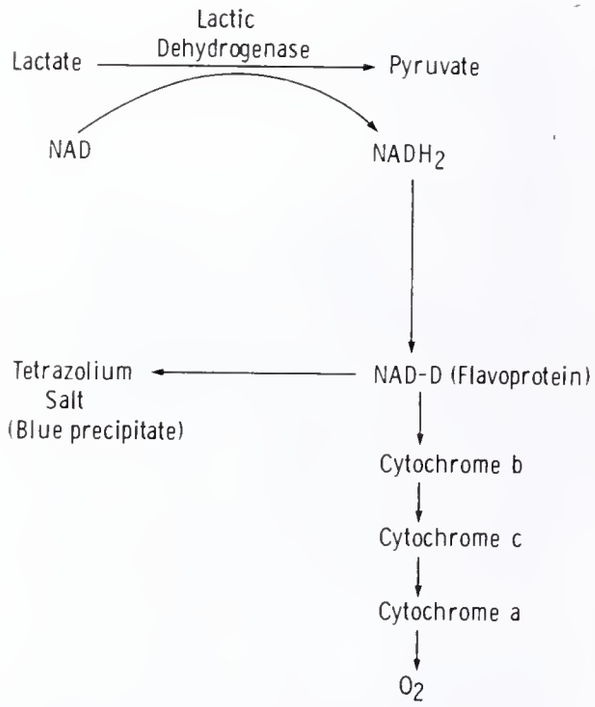
These days, muscle biopsy, like everything else, is an art. To get the maximum information from the procedure it must be done extremely well following recognized techniques.

The purpose of this article is to review briefly the technique of muscle biopsy including the methods of obtaining and preparing the muscle biopsy specimen. The value of muscle biopsy histochemistry in helping establish the correct diagnosis will be illustrated, correct diagnosis being a necessary prelude to proper treatment, genetic counseling, and prognosticating. The results of the first 500 muscle biopsies processed with histochemistry at the Baylor College of Medicine are reviewed to show the diagnoses commonly made here in Texas.

Obtaining the Specimen

The physician investigating the patient should do the muscle biopsy himself to select the proper region, handle the tissue correctly prior to and during removal, obtain adequate material, and preserve and distribute specimens in the optimal manner to special laboratories. Our previous experience has led to the following rules:

1. Select a muscle that is mildly but definitely involved clinically. A muscle that is normal clinically is not likely to reveal abnormalities histologically. Muscles that are more severely involved clinically are likely to be too infiltrated with fat and connective tissue to show what caused the underlying disease process. Therefore, in order to avoid the extremes of early minimal involvement or late severe change, a biopsy should be done on a muscle in which there is clinical weakness, wasting, or a decreased tendon jerk, but in which function has not been severely impaired. Another important consideration is duration of involvement. If neuromuscular disease has been present for a long time, say several years, the biopsy should be taken from a muscle that is clinically less severely involved. If the disease is of shorter duration, or mild in nature, better information may then be obtained from a muscle more severely involved.
2. Avoid all muscles where unrelated factors might cause pathologic changes. Needles, from electromyography or injections, for instance, cause focal myopathy with inflammation and might lead to the erroneous diagnosis of polymyositis.
3. Try to perform all biopsies, even in children, under local anesthesia. Do not in-



1. Lactic dehydrogenase is a substrate-specific oxidative enzyme which helps transfer hydrogen (electrons) from the substrate lactate to an acceptor. Either NAD (coenzyme I, DPN) or NADP (coenzyme II, TPN) are required by lactic dehydrogenase to act as an intermediate carrier of the hydrogen (electrons) to oxygen. The principle of histochemistry is to employ a colorless, soluble tetrazolium salt which intercepts the electrons at some point along the respiratory chain and is reduced to a deeply colored, insoluble formazan product deposited (usually) at the site of enzyme activity.

2. Lactic dehydrogenase staining.

1. Incubate fresh frozen tissue specimens at 37°C for 30 to 60 minutes in the following solution:

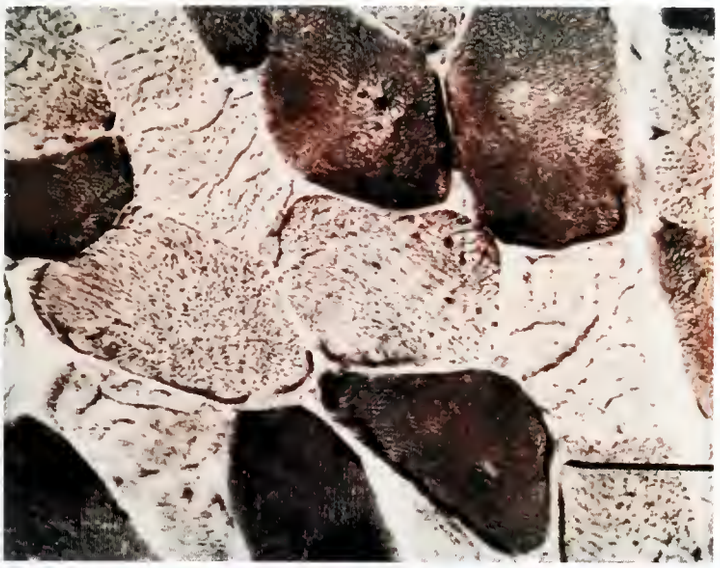
Sodium lactate	0.5 ml
Nitroblue tetrazolium	10 mg
0.2 M Tris buffer	10 ml
Nicotinamide adenine dinucleotide	4 mg
Adjust pH to 7.0	

2. Extract with acetone
3. Rinse in distilled water
4. Mount in glycerin jelly

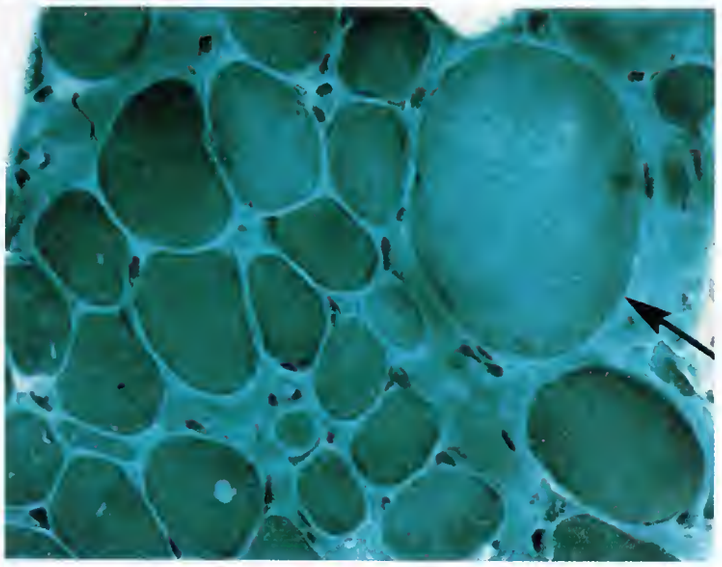
filtrate the muscle with anesthetic as this changes the configuration of individual fibers making them rounded and tends to separate fibers from each other. If multiple specimens are to be taken, work along the surface of the muscle instead of going deeper. That way you avoid deep holes and dead space which predispose to infection and hematoma.

Histochemistry Preparation

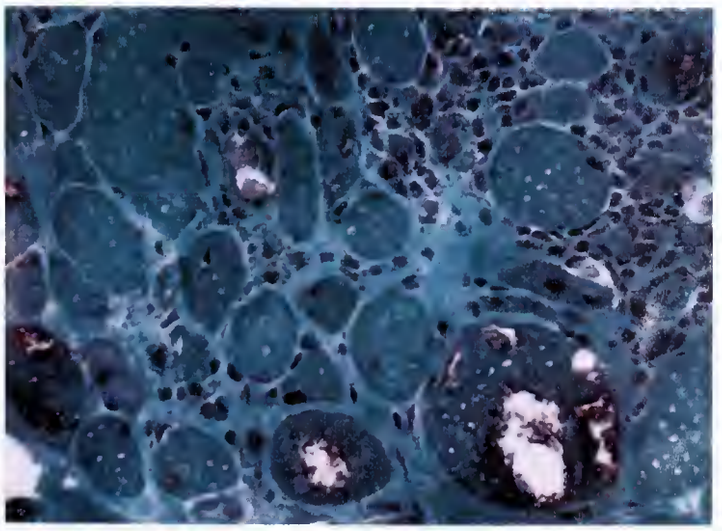
The muscle biopsy specimen is mounted on a chuck and frozen in isopentane, cooled in liquid nitrogen, and then sectioned in a cryostat at temperatures between —15° C and —20° C. The 10-micron-thick sections, adherent to glass coverslips, are incubated in 10-ml solutions of reactants to study enzymes or metabolic storage products. If we were interested in the enzyme lactic dehydrogenase, which converts lactic acid to pyruvic acid (Fig 1), we could study the enzyme by using a special tetrazolium salt which turns from soluble and colorless to insoluble and blue when it is reduced. Since tetrazolium will preferentially be reduced wherever reduced nicotinamide adenine dinucleotide ($NADH_2$) is formed, the blue parts of the tissue slide will represent the sites of lactic dehydrogenase activity. Fig 2 gives the recipe for lactic dehydrogenase staining. In a similar way many other enzyme and metabolic products can be studied in tissue sections. Fig 3 shows the appearance of muscle using the lactic dehydrogenase enzyme stain. Note that there are two main types of muscle fibers, called type 1 and type 2. Type 1 (the darker fibers in the picture) are slow twitch, oxidative fibers, and type 2 (the lighter fibers) are fast twitch, glycolytic fibers. By special stains the size, shape, distribution, and other



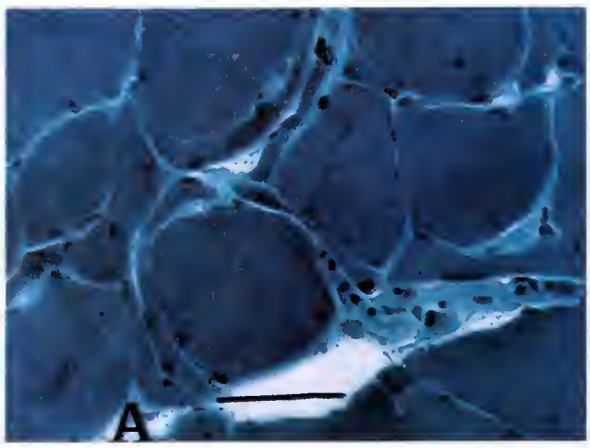
3. Normal human skeletal muscle. Lactic dehydrogenase on fresh frozen section. Darker fibers are type 1, lighter fibers are type 2. Black bar equals 60 microns.



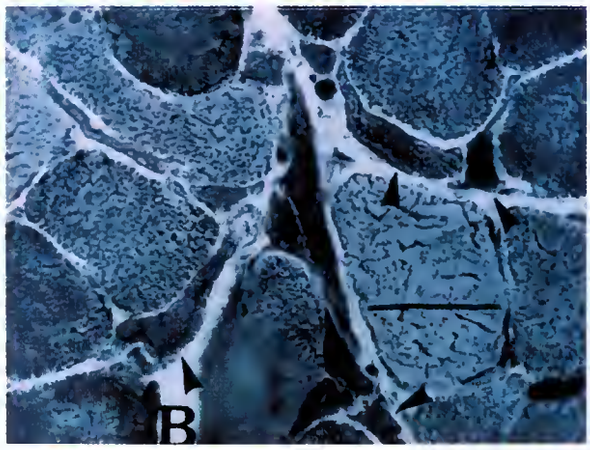
4. Modified trichrome on fresh frozen sections. Note rounding of fibers, variation in fiber size, and increased connective tissue. Human skeletal muscle. Myopathy: Duchenne dystrophy. Largest fiber (arrow) is hypertrophied with a diameter of 90 microns. Normal diameter for age 5 is 22 microns.



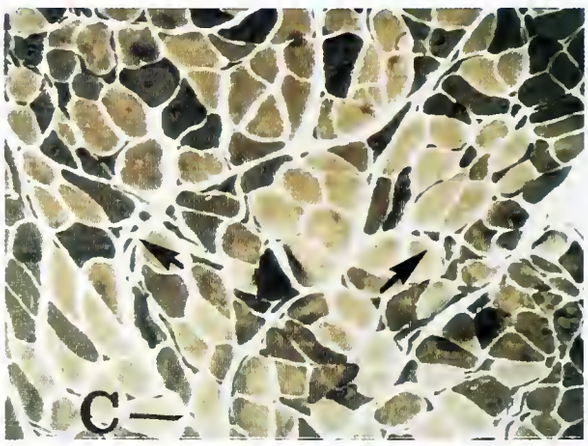
5. Modified trichrome on fresh frozen section. Note features of myopathy (rounding of fibers, variation in fiber size, and increased endomysial connective tissue) superimposed on which are dense focal collections of inflammatory cells. Human skeletal muscle. Inflammatory myopathy: polymyositis. Largest fiber has a diameter of 60 microns.



6a. Muscle biopsy showing small angular fibers. Modified trichrome. Human skeletal muscle. Neurogenic atrophy secondary to phosphate depletion in Franconi syndrome. Black bar equals 60 microns.

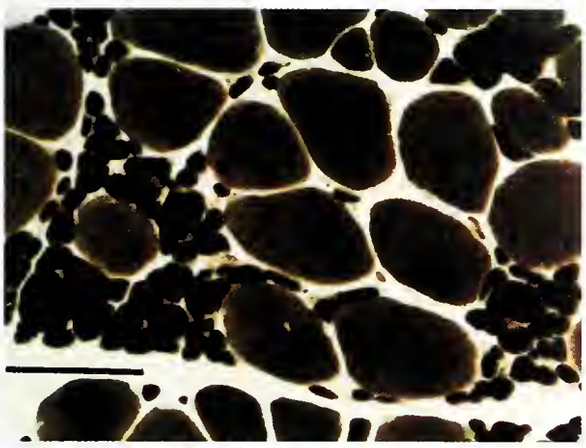


6b. The small angular fibers stain dark with oxidative reactions (pointers). Same patient as in 6a. DPNH—Tetrazolium reductase. Black bar equals 60 microns.

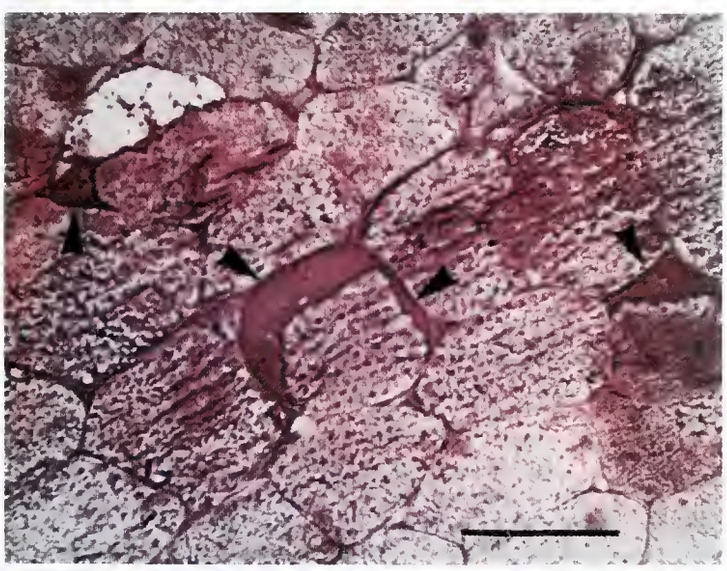


6c. Groups of small angular fibers of both histological types (arrows). Same patient as in 6a. Adenosine triphosphatase, pH 9.4. Black bar equals 100 microns.

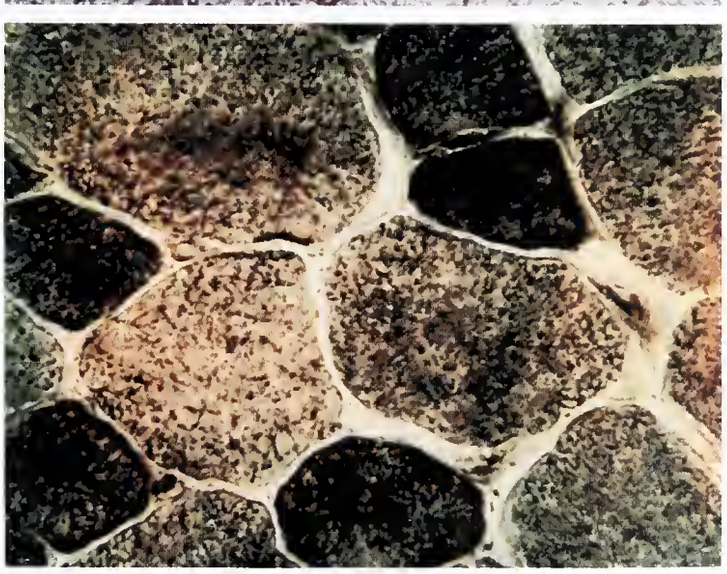
6d. Type grouping with loss of normal distribution of the two fiber types. Note also the group of very small angular fibers (arrow). Human skeletal muscle. Amyotrophic lateral sclerosis. Black bar equals 100 microns.



7. Adenosine triphosphatase, pH 9.4 on fresh frozen section. Note hypertrophied fibers in this stain are type 1. Normal fiber diameter for age 4 is 20 microns for both fiber types. Human skeletal muscle. Werdnig-Hoffmann disease (also known as infantile spinal muscular atrophy). Black bar equals 60 microns.

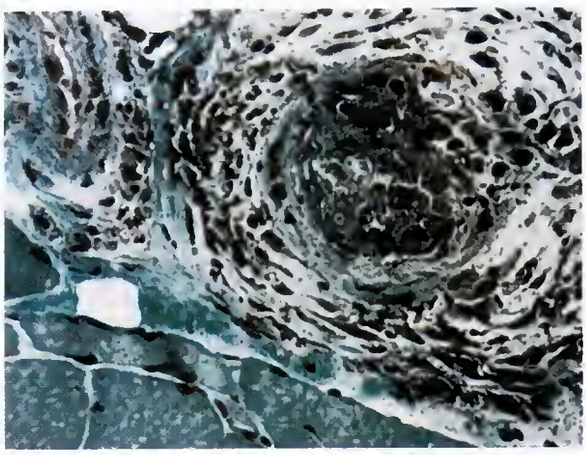


8. Periodic acid Schiff, on fresh frozen section. Note subsarcolemmal deposit (pointers) compressing myofibrillar material. Human skeletal muscle. Von Gierke's disease (also known as glucose-6-phosphatase deficiency). Black bar equals 60 microns.



9. Reduced diphosphopyridine nucleotide tetrazolium reductase on fresh frozen section. The enlarged, lighter, type 2 fibers measure 50 microns in diameter. The type 1 darker fibers measure about 20 microns in diameter, the normal size for this age. Human skeletal muscle. Fiber type disproportion.

Histochemistry



10. Modified trichrome on a frozen section. Note the small artery (about 30 microns in diameter) undergoing fibrinoid necrosis with occlusion of the vessel's lumen and acute inflammation of the mural elements. Human skeletal muscle. Periarteritis nodosa.

11. Histological diagnosis; 1975-1976 Baylor experience with 500 muscle biopsies.

Neurogenic atrophy	29%
Inflammatory myopathy	18%
Normal	13%
Fiber type disproportion	7%
Type II atrophy	5%
Duchenne dystrophy	4%
Rhabdomyolysis	3%
Miscellaneous*	21%

*Includes endstage pathology, mitochondrial myopathy, limb-girdle dystrophy, sarcoid of muscle, central core, Werdnig-Hoffmann, myotonic dystrophy, Talwin-induced myopathy, amyloidosis, lupus arteritis, rheumatoid arteritis, hypothyroid myopathy, central nuclear myopathy, and necrotizing myopathy.

characteristics of the two fiber types may be ascertained and studied.

Reading the Biopsy

Much of the interpretation of muscle biopsy is based on the previous experience of the reader and his recognition of similarities between the biopsy specimen and muscle tissue from known diseases. Our usual approach is to decide whether the specimen is normal, myopathic, or neurogenic, and then to attempt to further classify the findings into a more exact diagnosis.

Myopathy: The major findings in myopathy are illustrated by Fig 4. Note the rounding of fibers, increased endomysial connective tissue separating the fibers, and the variation in fiber size. Fig 5 shows the additional features of inflammation and multivacuolation of fibers that may be seen in inflammatory myopathy.

Neurogenic Diseases: In neurogenic diseases the motor nerve to the muscle is interrupted and the individual muscle fibers become thin and angular in cross sectional diameter. The nuclei appear more prominent since the bulk of the fiber is less, and in severe atrophy collections of small dark nuclei, called pyknotic nuclear clumps, are all that remains. Later on collateral sprouts from preserved axons may reinnervate the clumps or the small angular fibers. When reinnervation occurs the fiber diameter increases toward normal and, since fiber type is determined by the neuron controlling the muscle fiber, extensive reinnervation by a single neuron in a group of neurons will lead to fiber-type grouping.

Fig 6 illustrates the findings in neurogenic disease as it affects muscle. Note the small angular fibers (Fig 6a, b), grouped atrophy (Fig 6c, d), and type grouping (Fig 6d), features which significantly differ from the findings in myopathy outlined above.

Besides distinguishing myopathy from neurogenic atrophy, muscle biopsy histochemistry may suggest more specific diagnoses. A few of these are illustrated in the following case reports. Those readers seeking further details on this extensive subject should consult the text by Dubowitz and Brooke.[1]

Case Reports

Case 1: A hypotonic child, age 4, was weak and tired most of the time and was thought to have a dystrophy because he waddled and arose from the floor using a Gower maneuver. Muscle biopsy showed large, rounded, type 1 fibers mingled with small, rounded, atrophic fibers (Fig 7) establishing the diagnosis of Werdnig-Hoffmann disease and helping establish the correct genetic counseling. (Werdnig-Hoffmann is an autosomal recessive disorder; Duchenne's dystrophy is x-linked recessive.)

Case 2: A hypotonic infant's muscle biopsy showed excessive deposition of PAS-positive material in subsarcolemmal regions, establishing the diagnosis of glycogen storage disease (Fig 8).

Case 3: The condition of a four-year-old child, diagnosed as having dystrophy, did not worsen the way other doctors had said it would, so the parents asked for a muscle biopsy. The findings of normal type 1 fibers and enlarged type 2 fibers (Fig 9), (normally in childhood both fibers are the same size) established the diagnosis of fiber type disproportion syndrome, a benign condition causing weakness in this age group.

Case 4: A man clinically diagnosed as having amyotrophic lateral sclerosis because of progressive weakness and normal serum enzymes had a muscle biopsy which showed rounding of fibers, variation in fiber size, increased connective tissue, multivacuolation of fibers, and foci of round inflammatory cells, establishing the diagnosis of polymyositis (Fig 5). Treatment with prednisone improved the condition.

Case 5: A 48-year-old woman complained of numbness and pain in both feet. Examination showed acral sensory loss and weakness. Muscle biopsy showed severe necrotizing arteritis, establishing the diagnosis of periarteritis nodosa (Fig 10).

Naturally, it is not possible in every case to make an absolute distinction between myopathy and denervation atrophy. Fig 11 shows the relative distribution of diagnoses based on experience with more than 500 muscle biopsies processed for histochemistry at Baylor College of Medicine. Note that about one-third of patients had neurogenic atrophy. Most of these patients had motor neuron disease as the final diagnosis. About 20% of patients had inflammatory myopathy, a treatable condition and, therefore, well worth looking for. Although 13% of patients had normal findings on biopsies, this does not mean those patients did not have a neuromuscular disease. The muscle removed at biopsy is only a small sample of the total muscle mass and, since many muscle diseases are patchy and irregularly focal in the way they attack muscle, we may, by chance, biopsy an area that appears normal. On the other hand, there are several conditions with clinical and/or electromyographic evidence of neuromuscular disease (for instance, most cases of hypothyroid myopathy) where muscle biopsy tissue is characteristically normal.

Conclusion

Careful study of a muscle biopsy specimen using histochemical methods can add a great deal to the evaluation of a patient who has a neuromuscular disease. In our Department of Neurology, muscle biopsy is considered to be one of the most important diagnostic procedures done in patients with neuromuscular disease.

Supported by a grant from the Muscular Dystrophy Associations of America. All the histochemical sections were prepared by Mr. Karam Mata.

Reference

1. Dubowitz V, Brooke MH: Muscle biopsy: a modern approach. London, WB Saunders Co, Ltd, 1973.

Bernard M. Patten, MD; Shin Siung Jung, MD; and Karam Mata, BS, Department of Neurology, Division of Neuromuscular Diseases, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030.

Fractures of the femoral neck: a review article

John K. Dozier, Jr, MD

Fractures of the neck of the femur are similar to other common fractures in that they follow a remarkably similar pattern—not a variable pattern as described by Pauwels. The fracture line usually lies at an angle of 50° with the horizontal and posterior wall of the neck is almost always comminuted if there is any displacement. Rigid criteria of reduction were described by McElvenny years ago,[8] but apparently those criteria have been met only rarely. Instead, numerous fixation devices have been invented, each intended to produce high union rates and low avascular necrosis rates. If a fracture of the femoral neck is reduced according to rigid criteria and is impacted, any of several fixation devices will produce about the same rates of union and avascular necrosis.

Anatomy

The head of the femur is not round but is ellipsoidal with several different radii.[1] The femoral head is usually considered to sit squarely on the neck of the femur and most diagrams show it this way. Actually the head is situated eccentrically with the neck in a slightly anterior position and with a posterior overhang of the head (Fig 1). The triangular section of the neck, illustrated in red, which supports the overhang, is the area which comminutes and produces instability[2] (Fig 2). Internally, the medial compression trabeculae ascend to the weight-bearing part of the femoral head and are in alignment with similar trabeculae in the pelvis. The tension trabeculae start in the medial and inferior part of the head, span across the superior neck, and terminate in the trochanteric area. The region between these two trabecular systems is known as Ward's triangle. In the anteroposterior view, the medial trabecular stream forms an angle of 160° with the medial femoral cortex. In the true lateral view the sweep of the head anteriorly and posteriorly can be seen and the axis of the neck and head are in line at 180°.[1]

Nature of the Fracture

Pauwels contended that the fracture line was of varying obliquity, the type 3, or 70°, being the most unstable and the least likely to heal. Actually, femoral necks do not seem to fracture the way Pauwels described. In addition, those who have accepted Pauwels' classification have not found a correlation between the angle of the fracture line and rates of union. Garden

1. Posterior overhang of femoral head and anterior placement of the femoral neck.

stated in 1967, "The fracture line, as in every common fracture, is remarkably constant. It lies in a region of 50° with the horizontal, in the frontal x-ray and the appearance of greater obliquity is usually the result of x-ray misinterpretation."[1] Klenerman and Marcuson noted essentially the same pattern of fracture in 20 femoral heads removed for prosthetic replacement. In each case, the proximal limit of the fracture was seen at the level of the old epiphyseal scar. The fracture line descended along the trabecular pattern of the femoral neck and created a 2-5 cm spike of calcar femorale on the head fragment. No truly transverse cervical fractures were seen in either series.[3] In addition, comminution of the posterior aspect of the neck is essen-

2. Posterior view of femoral neck and head; shaded triangular area comminutes.

tially always present when any significant displacement of the fracture has occurred. Earlier writers felt that approximately 60% of fractures were comminuted posteriorly.[4] Garden, who insisted on high-quality roentgenograms in an effort to measure femoral head angulation accurately, found posterior fragmentation in every displaced subcapital fracture.[1] Meyers and associates, in approaching the fracture site posteriorly to insert a muscle-pedicle bone graft, visualized comminution of the posterior neck in 90% of displaced femoral neck fractures, and in 71% of the total number of fractures the comminution was severe.
After reduction, they frequently noted a large cavity and marveled how any internal fixation device could hope to compensate for this defect.[5] Posterior comminution cannot be seen well on an unreduced view. It is best seen after a reduction has been obtained and classically presents as a triangular fragment posteriorly (Fig 3). Typically, greater comminution is present than can be seen on roentgenogram.

Mechanism of Fracture Production

The typical fracture of the femoral neck occurs in an elderly woman with osteoporotic bones. It is generally felt that the stresses of weight-bearing weaken the femoral neck and make it quite vulnerable. A trivial torsional incident then completes the fracture. With less severe moments of force the common valgus impaction occurs. Actually the head is not only in valgus, but has an additional posterior tilt. With more severe force, the posterior neck fragments and the shaft rotate externally. Finally, on separation, the shaft lies in external rotation while the head, being a free fragment, returns to neutral position. Garden proposed a classification of femoral neck fractures according to the degree of displacement:

Stage I. Incomplete fracture. Head tilted slightly in the valgus.

Stage II. Complete fracture with perhaps slightly further displacement. The stage is set for comminution posteriorly.

Stage III. Complete fracture with partial displacement. The head is tilted into varus for the first time. Posterior comminution has occurred. The posterior retinaculum of Weitbrecht remains intact and, according to Smith, makes this fracture analogous to an open book.[6]

Stage IV. Complete displacement. The shaft has drifted proximally, the head has returned to neutral[1] (Fig 4).

Problem

The basic problem is to obtain union with no avascular necrosis in those patients who have longer life expectancies and who need hips for more vigorous use. In the elderly, partially infirm patient, the prosthesis is probably still the best answer as it will usually yield an acceptable result in popu-

3. Cross table lateral view of reduced femoral neck. Note posterior comminution.

4a. Garden I.

b. Garden II.

c. Garden III.

d. Garden IV.

lations whose needs are less. The solution to the problem of the younger patient is an excellent reduction meeting rigid criteria combined with impaction and any of several types of internal fixation devices.

Reduction

Reduction methods were described by Leadbetter in 1933,[7] and by McElvenny in 1945[8] and 1949.[9] McElvenny established what he considered to be an adequate reduction. He repeatedly stressed placement of the medial portion of the head fragment inside the medial portion of the neck fragment. He used a fracture table and placed the affected limb in 20-25° of abduction and in complete external rotation. Traction is increased while the hip is toggled up and down. When sufficient pull has been made and the adductors are taut, the foot piece is internally rotated with some pressure being applied at the knee. Internal rotation is continued until the patella faces medially. Roentgenograms are made. If the neck is not medial to the head, traction is increased, abduction is increased, and the proximal femur is pushed medially by means of pressure on the greater trochanter. After medial placement of the neck, the limb is adducted and fixation effected. Leadbetter favored a different technique utilizing maximal traction at 90°, internal rotation while traction was maintained, circumduction of the leg to an abducted position, and use of the heel-palm test. Since these early writings practically all articles except those by Garden and Metz show a glaring lack of attention to criteria of reduction of intracapsular hip fractures. In almost all articles, the reductions are mentioned in passing as being "adequate," "optimum," or "good," with no reference to specific head-neck relationships or varus-valgus angles. There have been numerous articles describing new fixation devices, but very few describing any improved methods of reduction. A new method of reduction based on anatomy has been described by Flynn.[10] He points out the spiral arrangement of the fibers of the hip capsule and the fact that the femoral head is most congruous in full extension. He applies traction to the femur in line with the axis of the neck with the hip in an "unwound" position. This maneuver gains alignment. Internal rotation then supplies force by means of spirally arranged fibers to bring the fragments together. Utilizing this method he produced impressive results in 111 fractures utilizing only a Smith-Petersen nail. The short six months followup was recognized.

Most attention is given to the anteroposterior view because it is easier to see. Actually the lateral view is equally important. Garden[1] relies on the appearance of the fragments in the lateral view as the best mirror of reduction and "the best" guide to prognosis. The central axis of the head and neck should be in line and the head cortex should be symmetrical on both sides of the neck.

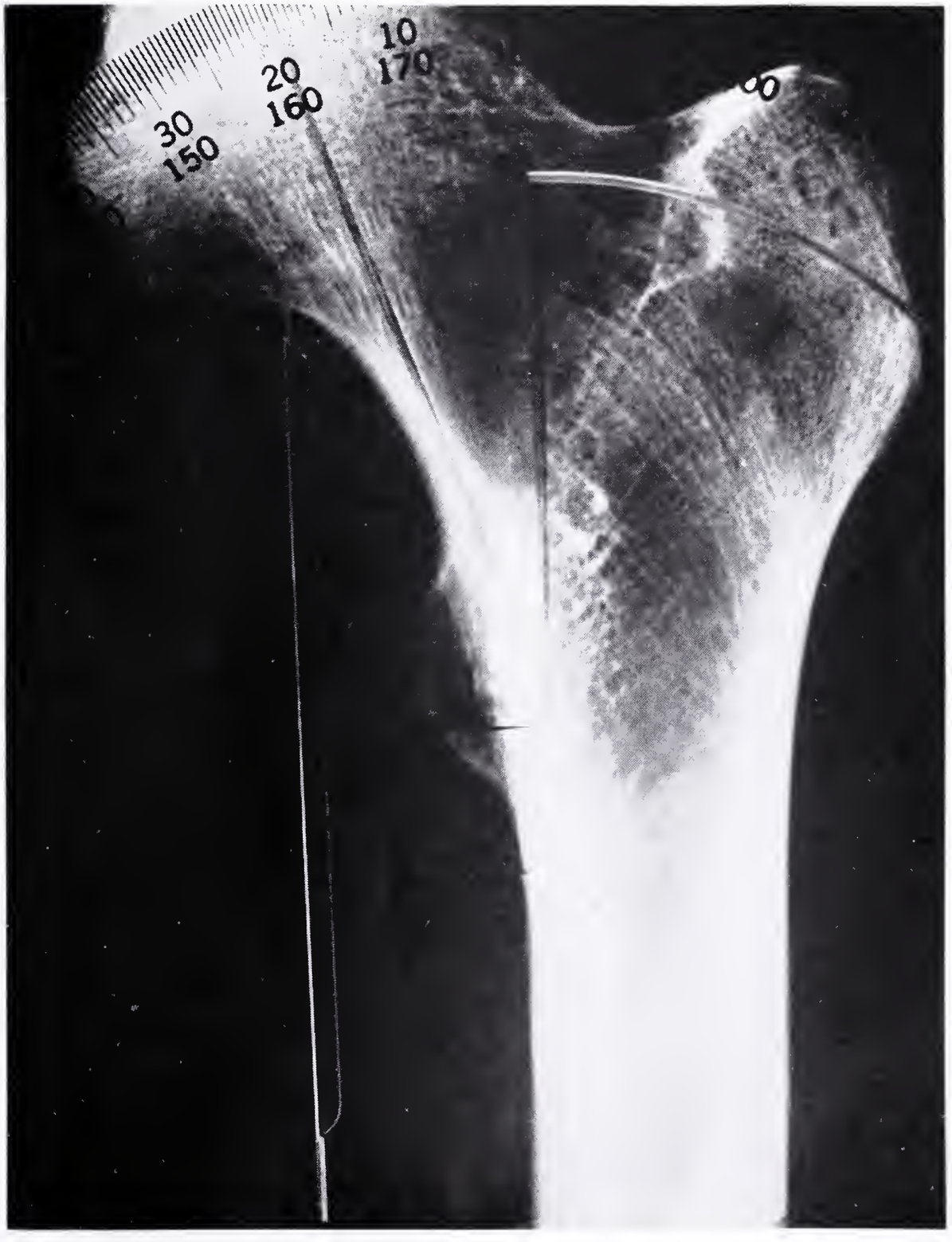
Stability of a displaced femoral neck fracture depends primarily on the reduction, not on which internal fixation device is employed. Obtaining a good reduction which meets rigid criteria is actually the greatest practical problem in femoral neck fractures. Garden has stated that the next major contribution to the femoral neck problem will be the development of a technique that will insure perfect reduction of every displaced femoral neck fracture.[1]

Good reductions are difficult to obtain, as evidenced by Garden's statement that reductions which meet his criteria happen with a 50% success rate with the first manipulation.[1] When excellent reductions are obtained, however, the fracture unites almost without exception and avascular necrosis is quite rare. Cleveland and Fielding reported that in a series of 335 fractures of the femoral neck, "perfect reapposition of the fragments has never been obtained."[11] Garden reported that of 427 subcapital fractures observed for an adequate number

of years, only 65 were seen with their fragments in normal or nearly normal position; 96% of these 65 fractures united.[1]

Criteria of Reduction

Garden developed an index of reduction in which a perfect reduction is 160°/180°; in other words, normal anteroposterior and lateral view angles are restored.[12] In the anteroposterior view, if a circular 360° protractor is placed over the anteroposterior view of the hip, the compression trabeculae are at an angle of 160° with the medial femoral cortex (Fig 5). In the lateral view, perfect head and neck alignment exist at 180°. In 1971 Garden correlated the accuracy of reduction with late superior segmental col-



5. Medial compression trabeculae form an angle of 160° with medial femoral cortex.

lapse in 402 cases.[13] If the alignment index was perfect (63 cases), there were no cases of segmental collapse. If the index was acceptable, within 155-180° in both views, there was a 7.3% incidence of collapse. If the index was poor, out of 155-180° range, there was 53.8% incidence of avascular necrosis.

Impaction and Fixation

If a fracture has been well reduced according to the outlined criteria, there are a va-

6. *Note medial aspect of head* inside *medial aspect of neck.*

riety of fixation devices, all of which have been associated with acceptably low nonunion rates and percentages of avascular necrosis:

1. Deyerle: 0% nonunion and 7% avascular necrosis.[14]

2. Metz: 4.7% nonunion rate and 11.6% avascular necrosis.[15]

3. Fielding-Pugh Nails: 90% union and 18% avascular necrosis.[16]

4. Garden: A cross-screw technique in which the screws touch at the point of crossing. 80% union.

The Deyerle apparatus utilizes the principle of multiple peripherally placed pins across a well-reduced and well-impacted fracture. The most important feature of the Deyerle technique is the controlled powerful impaction that can be obtained. Deyerle has emphasized that the pins should back out one-fourth to one-half inch with impaction. A few technical points of the Deyerle technique are worth comment:

1. Guide Wire Placement: The power drill greatly facilitates guide wire placement when using a 140° angle determinor. Guidewire placement exactly parallel to the floor in the lateral view is essential. If the guide wire is off a few degrees, then the entire mass of pins will be off by a similar amount and poor head penetration and fixation result.

2. Proper Length of Pins: The pins should finalize just under (one-eighth inch) subchondral bone after full seating and being fully impacted.

3. Proper Number of Pins: There should be at least 9 and preferably 12 pins.

Summary

Fractures of the femoral neck follow a remarkably constant pattern. The fracture line follows the trabecular pattern of the femoral neck and forms an angle of 150°. With any significant displacement, the posterior neck is comminuted 90% of the time. An exact reduction which meets rigid criteria is essential.

1. The reduction must fall within 155-180° on both anteroposterior and lateral views.

2. The reduction effects placement of the medial side of the head inside the medial side of the neck (Fig 6).

This type of reduction, in combination with strong impaction and any of several adequate fixation devices, will yield a high percentage of union without avascular necrosis.

References

1. Garden RS: Reduction and fixation of subcapital fractures of the femur. Orthopaed Clin N Amer 5:683-712, 1974.

2. Garden RS: Stability and union in subcapital fractures of the femur. J Bone Joint Surg 46B:630-647, 1964.

3. Klenerman L, Marcuson RW: Intracapsular fractures of the neck of the femur. J Bone Joint Surg 52B:514-517 (3), 1970.

4. Scheck M: Comminuted fractures of the posterior wall of the neck of femur. Clin Orthopaed 54:13-28, 1967.

5. Meyers MA, Harvey JP, Moore TM: The muscle pedicle bone graft in the treatment of displaced fractures of the femoral neck; indications, operative technique, and results. Orthopaed Clin N Amer, 5:779-792, 1774.

6. Smith LD: Hip fractures; the role of muscle contraction or intrinsic forces in the causation of fractures of the femoral neck. J Bone Joint Surg 35A:367-383, 1953.

7. Leadbetter GW: A treatment for fracture of the neck of the femur. J Bone Joint Surg 15:931-940, 1933.

8. McElvenny RT: Roentgenographic interpretation of what constitutes an adequate reduction of femoral neck fractures. Surg, Gynec Obstet 80:97-106, 1945.

9. McElvenny RT: Management of intracapsular hip fractures. Surg Clin N Amer 29:31-58, 1949.

10. Flynn M: A new method of reduction of fractures of the neck of the femur based on anatomical studies of the hip joint. Injury 5:309-317, 1974.

11. Cleveland M, Fielding WJ: A continuing end-result study of intracapsular fracture of the neck of the femur. J Bone Joint Surg 36A:1020-1030, 1954.

12. Garden RS: Low-angle fixation in fractures of the femoral neck. J Bone Joint Surg 43B:647-663, 1961.

13. Garden RS: Malreduction and avascular necrosis in subcapital fractures of the femur. J Bone Joint Surg 53B:183-197, 1971.

14. Deyerle W: Multiple-pin peripheral fixation in fractures of the neck of the femur: immediate weight-bearing. Clin Orthopaed 39:135-156, 1965.

15. Metz W, Sellers TD, Feagin JA, et al: The displaced intracapsular fracture of the neck of the femur. Experience with the Deyerle method of fixation in sixty-three cases. J Bone Joint Surg 52A:113-127, 1970.

16. Fielding JW: A continuing end result study of displaced intracapsular fractures of the femur treated with the Pugh nail. J Bone Joint Surg 56A:1464-1472, 1974.

John K. Dozier, MD, Spring Branch-Memorial Orthopaedic Clinic, 9320 A Westview, Houston, TX 77055.

2nd ANNUAL EMERGENCY MEDICINE SYMPOSIUM

SEPTEMBER 12-14, 1977 — SAN ANTONIO, TEXAS

Sunday, September 11
3:00 p.m. Registration

Monday, September 12
7:00 a.m. Registration Opens
8:15 a.m. Welcoming Remarks
George Pruett, MD
8:30 a.m. Advanced Life Support (Groups I and II)
12:30 p.m. Lunch
2:00 p.m. Dermatology for Emergency Physicians
D.E. Vander Ploeg, MD
2:00 p.m. Advanced Life Support (Group I)
7:00 p.m. Reception (Combined with EDNA and EMTs)

Tuesday, September 13
8:00 a.m. Advanced Life Support (Group I)
9:00 a.m. Plastic Surgery for Emergency Physicians
Francis Burton, MD
12:00 Lunch
1:00 p.m. Advanced Life Support (Group II)
2:00 p.m. Dermatology for Emergency Physicians
D.E. Vander Ploeg, MD
7:00 p.m. Texas ACEP Chapter Meeting
8:00 p.m. Dinner on the River

Wednesday, September 14
8:00 a.m. Examination for Advanced Life Support (Group I)
9:00 a.m. Medical-Legal Problems (Panel) (Combined with EDNA and EMTs)
12:00 Lunch
1:00 p.m. Advanced Life Support (Group II)
5:00 p.m. Examination for Advanced Life Support (Group II)

REPLY: TEXAS CHAPTER
AMERICAN COLLEGE OF EMERGENCY PHYSICIANS
730 NORTH MAIN, SUITE 624
SAN ANTONIO, TEXAS 78205

REGISTRATION INFORMATION

	Early	Late
Member:		
ALS & 1 PG Course	140	165
ALS & 2 PG Courses	150	175
Non-Members:		
ALS & 1 PG Course	160	180
ALS & 2 PG Courses	175	195
Two PG Courses Only	60	75

NOTE: Physicians registering for the Advanced Life Support Course must have completed the Basic Life Support (CPR) course and have a certification card from the American Heart Association to qualify for the ALS Program.

At your service!

Texas Medical Association

1977 Conference on Medical Service

Saturday, September 10, Austin

8:30 am to 2:45 pm Thompson Conference Center

Featured Speakers:

- Tom Nesbitt, MD
  AMA President-Elect
- Kenneth Platt, MD
  Medical Director
  Colorado Foundation
  for Medical Care
- Hon Robert Krueger
  US Congressman
- Ralph Emerson, MD
  Immediate Past President
  Medical Society
  of State of New York

Panels: New state Laws Affecting Physicians
Professional Liability in Texas

Plus: Orientation Program; Football—Texas vs. Boston College; Board, Council and Committee Meetings; Luncheon

NO REGISTRATION FEE! WATCH FOR MORE INFORMATION IN THE MAIL.

Activity of rheumatoid arthritis during pregnancy

Nancy T. Neely, MD; Robert H. Persellin, MD

Amelioration of the activity of rheumatoid arthritis occurred during 35 of 56 pregnancies and exacerbations developed post partum in all after an average of six weeks. Improvement was apparent in the first trimester in 20 of the pregnant women with rheumatoid arthritis, in the second trimester in12, and in the third trimester in 3. Four patients related the onset of rheumatoid arthritis late in the course of gestation. Thus, in 62% of the patients a subsidence of inflammatory synovitis during gestation was related. Some possible reasons for the suppression of this inflammatory disease during pregnancy are considered, together with observations on why more than 25% of patients with rheumatoid arthritis failed to improve. Pregnancy-specific serum proteins developing during gestation have anti-inflammatory action and are related to the effects of pregnancy on rheumatoid arthritis.

Remissions of the symptoms of rheumatoid arthritis (RA) frequently occur during pregnancy. First studied by Hench in 1938,[1] this association is now generally accepted and found in standard texts and references.[2,3] Hench noted lessening of disease activity in 20 of his 22 patients relating coincidental pregnancies. Since his original, mainly retrospective comments, there have been several published series corroborating this association.[4-9] Our report deals with an analysis of rheumatoid arthritis during 56 pregnancies in 20 patients with active rheumatoid arthritis present either at the onset of gestation or occurring during its course.

Methods

Patients with definite and classical rheumatoid arthritis were interviewed at the rheumatology clinics of The University of Texas Health Science Center at San Antonio. Details concerning the duration, course, treatment, complications, and activity of the arthritis were obtained, together with their concurrence during pregnancies. Care was taken to obtain the time of change in disease activity. Intensity of arthritis was estimated on a 0-4+ scale, 4+ being a disease intensity of prolonged morning stiffness and active inflammation of multiple joints, limiting the individual to the performance of little or none of the duties of usual occupation or of self-care (functional classification III of the American Rheumatism Association). In this retrospective analysis of 130 women, it was found that 20 patients had had 56 pregnancies coincident with the active phase of their RA.

Results

Arthritis improved during 35 of the 56 pregnancies (62%). Fewer joints were involved, the duration of morning stiffness decreased, and less medication was required. Twenty-one (38%) experienced either no change in the activity of their RA or became worse during gestation, and in 4 of these patients the initial signs and symptoms of RA had their onset during the pregnancy.

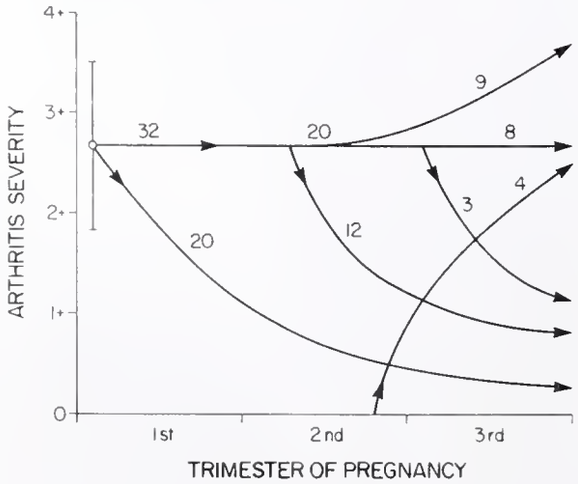
Shown in Fig 1 is the course of RA activity during gestation in these 56 pregnancies. Of this number, 52 had active disease at the time they became pregnant. Most noted improvement during the first trimester (20 of the 35 improving), 12 experienced amelioration beginning in the second trimester, and 3 had lessening of RA activity only in the third trimester of pregnancy. With rare exception, once improvement was noted, it persisted and

usually became more nearly complete during gestation. Arthritis activity subsided to a greater degree in those noting improvement in the first trimester. Also shown in the figure are the numbers of patients either not improving (8 of 56), suffering intensification of RA activity (9), and having the first signs and symptoms of RA during pregnancy (4). Thus, 38% of the patients in our series failed to experience improvement in arthritis and 23% (13 patients) actually had a worsening of their disease. Contrasting the features of RA in those relating improvement with those not so benefited during gestation (excluding the 4 having the onset of RA during pregnancy) did not reveal significant differences in either age of the patients, duration of disease activity, stage or functional class of RA, or serologic (rheumatoid factor) abnormalities.

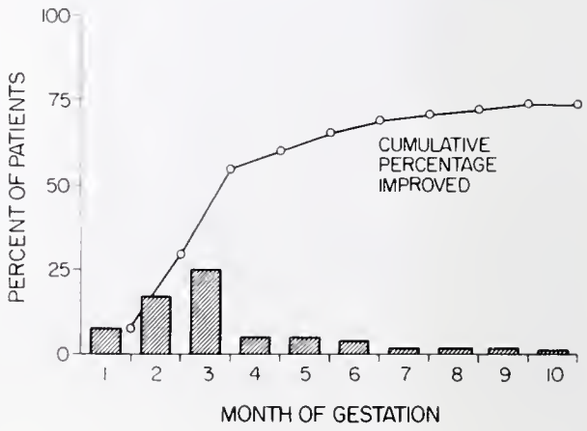
The number of our patients improving and the time of onset of amelioration was similar to that described by others (Fig 2). Shown is a compilation of data presented in numerous published studies, including Hench's original observations.[1,4-9] Of 296 pregnancies reported in RA patients, 219 were described as showing a significant reduction in RA activity. Most related improvement during the first three months, but relief was delayed beyond the first trimester in 20% of all patients reported. As we found in our analysis, the previous reports indicated that a large number of patients (26%) either experienced no change, had intensification of symptoms, or experienced onset of RA during pregnancy.

Following delivery, the symptoms of RA recurred in more than 90% of the patients. Exacerbation of arthritis in the patients in our series was noted as early as 1½ weeks after delivery. Although one patient had a remission lasting 11 years, most had a return of RA between the second and third months post partum. Thus, our experience parallels that reported in the literature (Fig 3). Information was available on only 128 patients. All related an exacerbation following parturition, most having a return

1. Change in rheumatoid arthritis activity during 56 pregnancies. Severity of arthritis in 52 (mean ±1 SD) was obtained in retrospective analysis at the onset of gestation and estimated thereafter. The numbers of patients showing change in arthritis severity at various trimesters are presented.



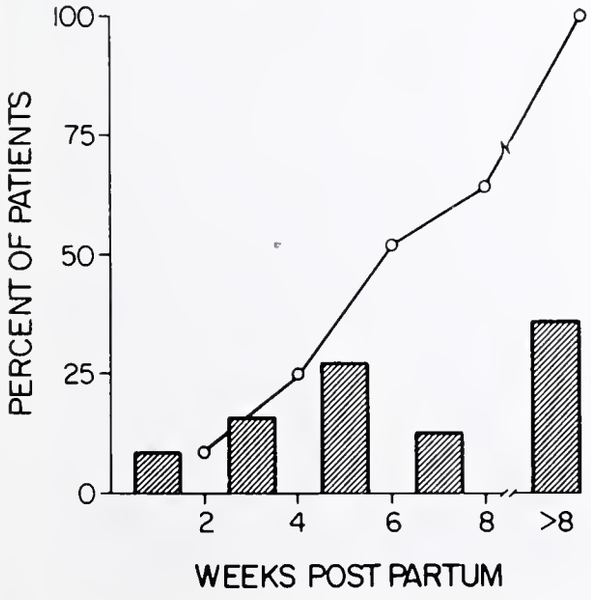
2. Analysis of the time of onset of symptomatic improvement in rheumatoid arthritis activity during 296 pregnancies described in the literature. Cumulative percentages of the 219 of 296 (74%) improving are shown together with the percentage of patients relating the onset of improvement during each month of gestation.



of RA activity in the second month after delivery. Only 25% had exacerbations during the first month and 36% had a return of joint inflammation only after the eighth week post partum. It is apparent from a study of our patients and those previously reported that the benefits of pregnancy are temporary but persist an average of six weeks after delivery.

Because of recent suggestions that salicylate therapy during pregnancy might be harmful, causing increased gestation time and prolonged and complicated labor,[10,11] we obtained information on aspirin ingestion during pregnancy in our patients together with complications. One gestation ended spontaneously at 5½ months with death of the premature infant, one child was stillborn at term, and a third had neonatal jaundice. During these pregnancies the mothers had taken approximately 2 gm of salicylates daily; the last two pregnancies were in the same patient. Both women were hypertensive during their pregnancies. A third patient took 4 gm of aspirin daily during the first trimester, then stopped aspirin on the advice of her physician and took only acetaminophen during the remainder of gestation. She had an uneventful pregnancy and was delivered of a normal male infant. Eleven other patients had taken salicylates in varying doses during the first trimester or sporadically throughout pregnancy without apparent side effects. No other abnormalities of gestation or labor were related. These observations are random and uncontrolled. They neither support nor confirm any potential harmful effects of aspirin, and prospective studies including plasma salicylate determinations will be required to answer this question.

3. Time of recurrence of rheumatoid arthritis symptoms post partum in 128 patients described in the literature. The cumulative percentage is presented as well as the percent experiencing exacerbations in each two-week period after parturition.



Discussion

In the presence of pregnancy, rheumatoid arthritis "finds it difficult to progress, or indeed to do otherwise than to beat a rather precipitous retreat."[12] This comment was based on Hench's observations and has subsequently been supported in a number of studies. In the present report, we provide additional documentation on the course of rheumatoid arthritis activity during 56 pregnancies, and have collected the observations from the literature. It is clear that symptomatic improvement of rheumatoid arthritis occurs in the majority of pregnant patients. It is equally clear that at least 25% do not improve, experiencing either no change in disease activity, intensification of symptoms and signs, or the actual advent of RA during gestation. In our analysis, arthritis activity did not abate in 38% of the pregnancies. This compares with a high of 45% of patients who became worse or did not improve (Betson and Dorn)[8] and with a low of 11% in the original study by Hench.[1]

The relation between symptomatic improvement in RA and pregnancy is not coincidental. Whereas RA, especially in its early form, is associated with spontaneous exacerbations and remissions, the finding of marked improvement in the majority of

patients having definite and classical RA in functional II and III categories is highly unlikely. Our observations, like the majority of previous reports, are retrospective analyses based primarily on patients' subjective statements. No carefully documented prospective analysis of RA disease activity has been conducted. Careful notation of the duration of morning stiffness, quantitation of synovitis, measurement of muscle and joint function, and analysis of laboratory parameters have yet to be carried out. In this regard, we have initiated a long-term prospective analysis at The University of Texas Health Science Center in San Antonio in an attempt to obtain more objective data.

The factor(s) responsible for improvement is not yet known. Hench first associated amelioration of rheumatoid activity with jaundice and only later with pregnancy.[12] He called attention to the multitude of biochemical alterations in these two states and postulated that one biochemical alteration might benefit a patient with one type of arthritis and another chemical could affect another disease.[12] His observations on these clinical associations helped lead to the discovery of cortisone, for which Hench shared the Nobel Prize in physiology and medicine in 1950. Since the concentration of blood cortisol is increased during pregnancy, it has been related to the suppression of RA activity during gestation.[13] However, there is considerable evidence that the increased corticosteroid concentrations alone are not fully responsible for the improvement observed.[7,14-17] Some patients showing suppression of RA activity during pregnancy have not had increased plasma concentrations of corticosteroids, and others, failing to improve or experience exacerbations during pregnancy, have increased cortisol levels. Plasma cortisol concentrations fall to normal levels by 48 hours after delivery and yet RA remains suppressed post partum for more than six weeks in the majority of patients. Additional evidence against cortisol being the pregnancy-related suppressant is that the elevated plasma steroids are, in great part, bound to cortisol-binding globulins and are not biologically active in that state. Thus, as stated by the editors of the *Twelfth Rheumatism Review*, "The intriguing, if not explained, relationship between the physiologic effects of pregnancy and rheumatoid arthritis and the effects of adrenocortical steroids still merits further study."[18] The original enthusiasm for sex hormones being responsible for amelioration has not been substantiated by clinical trials. This subject has been reviewed[2,19] and no recent data provided.

Blood products obtained either during gestation or immediately post partum have also been administered to patients with RA in an attempt to suppress arthritis. Although therapeutic benefits have been described with the use of either maternal blood obtained from nonrheumatic women during the third trimester or in the first postpartum day, no successful treatment has been established as a result of these early trials.[14,20] Urine obtained from normal pregnant women and administered to patients with RA did not improve the recipients.[12]

More recent studies have focused on the role of other pregnancy plasma constituents. Levels of several plasma proteins are markedly increased during gestation. In addition to the carrier proteins such as transcortin, thyroxin and estrogen-binding globulins, transferrin and ceruloplasmin, levels of the coagulation proteins and the so-called acute phase proteins are increased.[21] Of the latter group, some are pregnancy-specific and have recently been studied.[22] A pregnancy zone protein (alpha-2 glycoprotein) has been shown to suppress the biologic activities of both polymorphonuclear leukocytes[23] and of lymphocytes.[24,25] Found at low concentrations in nonpregnant females, this protein increases during gestation in approximately

75% of women and decreases at a slow rate after delivery. By the sixth week post partum, it has returned to prepregnancy concentrations.[26] If this protein is effective *in vivo* as it has been *in vitro* in stabilizing membranes of isolated lysosomes,[27] in depressing polymorphonuclear leukocyte activities,[23] and in decreasing thymus-derived lymphocyte functions,[24,25] it could account for the amelioration of rheumatoid activity observed during pregnancy. The failure of approximately one-fourth of women with rheumatoid arthritis to improve during pregnancy might be explained by their failure to synthesize adequate amounts of this cell regulator during gestation.[26] Prospective studies will be required to confirm this association.

Not just rheumatoid arthritis, but the course of a number of other inflammatory and infectious disorders are altered during pregnancy.[28] In general, these diseases have not been carefully documented and the clinical observations have been less well monitored than those relating to RA. However, should they be valid, they could provide additional clues to the mechanisms responsible for alteration of inflammation during gestation.

Acknowledgements: This study was supported in part by grants from the South Central Texas Chapter of The Arthritis Foundation, The Ruth and Pernon Taylor Foundation of Denver, The West Foundation of Houston, and an Arthritis Clinical Research Center Grant from The Arthritis Foundation.

References

1. Hench PS: Ameliorating effect of pregnancy on chronic atrophic (infectious rheumatoid) arthritis, fibrositis, and intermittent hydrarthrosis. Proc Staff Meet, Mayo Clinic 13:161-167, 1938.

2. Hill SR Jr, Holley HL: Arthritis and Allied Conditions, 8th ed. Edited by JL Hollander and DJ McCarty Jr. Philadelphia, Lea & Febiger, pp 264-278, 1972.

3. Lansbury J: Pregnancy and rheumatoid arthritis. Bull Rheumat Dis 4:38-39, 1953.

4. Bayles TB, Riddell CB: Plasma lipids in patients with rheumatoid arthritis receiving gold salt therapy and during pregnancy. Amer J M Sc 208:343-350, 1944.

5. Torrent PB, Marcet CA: Influencia del embarazo sobre el curso de la poliartritis cronica progresiva. Rev Espan Reumat 4:96-99, 1951.

6. Oka M: Effect of pregnancy on the onset and course of rheumatoid arthritis. Ann Rheumat Dis 12:227-229, 1953.

7. Smith WD, West HF: Pregnancy and rheumatoid arthritis. Acta Rheum Scand 6:189-201, 1960.

8. Betson JR Jr, Dorn RV: Forty cases of arthritis and pregnancy. J Int Coll Surg 42:521-526, 1964.

9. Morris WI: Pregnancy in rheumatoid arthritis and systemic lupus erythematosus. Aust New Zeal J Obstet Gynaec 9:136-144, 1969.

10. Collins E, Turner G: Maternal effects of regular salicylate ingestion in pregnancy. Lancet 2:335-338, 1975.

11. Turner G, Collins E: Fetal effects of regular salicylate ingestion in pregnancy. Lancet 2:338-339, 1975.

12. Hench PS: The potential reversibility of rheumatoid arthritis. Proc Staff Meet, Mayo Clin 24:167-178, 1949.

13. Kendall ED: Adrenal cortex and rheumatoid arthritis (Heberden oration). Brit M J 2:1295-1299, 1951.

14. Granirer LW: Clinical response of rheumatoid arthritis to postpartum plasma; 2 year study. JAMA 146:995-997, 1951.

15. Wolfson WQ, Robinson WD, Duff IF: Probability that increased secretion of oxysteroids does not fully explain improvement in certain systemic diseases during pregnancy. J Michigan M Soc 50:1019-1022, 1951.

16. Oka M: Activity of rheumatoid arthritis and plasma 17-hydroxycorticosteroids during pregnancy and following parturition. Acta Rheum Scand 4:243-248, 1958.

17. Gould ID: Rheumatoid arthritis aggravated by pregnancy and controlled by cortisone. New York J Med 55:1164-1166, 1955.

18. Smyth CJ, Bunim JJ, Clark WS, et al: Rheumatism and arthritis: Review of American and English literature of recent years. Twelfth Rheumatism Review. Ann Int Med 50:365-801, 1959.

19. Dunn CW: Present status of endocrine therapy in arthritis. Med Clin N Amer 24:1697-1708, 1940.

20. Barsi I: A new treatment of rheumatoid arthritis. Br Med J 2:252-253, 1947.

21. Seal US, Doe RP: Effects of gonadal and contraceptive hormones on protein and amino acid metabolism in: Salhanick HA, Kipnis DM, Vande Wiele RL, Eds: Metabolic effects of gonadal hormones and contraceptive steroids. New York, Plenum Press, pp 277-318, 1969.

22. Lin TM, Halber SP, Kiefer D: Quantitative analysis of pregnancy-associated plasma proteins in human placenta. J Clin Invest 57:466-472, 1976.

23. Persellin RH: Alterations of polymorphonuclear leukocyte functions: Effects of pregnancy serum. 24th Colloquium on Protides of the Biological Fluids, Vol 26, 1976, pp 203-208.

24. Von Schoultz B, Stigbrand T, Tarnvik A: Inhibition of PHA-induced lymphocyte stimulation by the pregnancy zone protein. FEBS Lett 38:23-26, 1976.

25. Than GN, Csaba IF, Karg NJ, et al: Immunosuppressive effect of pregnancy-associated alpha$_2$-glycoprotein. Lancet 2:515, 1975.

26. Von Schoultz B: A quantitative study of the pregnancy zone protein in the sera of pregnant and puerperal women. Am J Obstet Gynecol 119:792-797, 1974.

27. Hempel KH, Fernandez LA, Persellin RH: Effect of pregnancy sera on isolated lysosomes. Nature (London) 225:955-956, 1970.

28. Persellin RH: The effect of pregnancy on rheumatoid arthritis. Bull Rheumat Dis 27:922-927, 1977.

Nancy T. Neely, MD, and Robert H. Persellin, MD, Division of Rheumatology, Department of Medicine, UT Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284.

BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY

INPATIENT-OUTPATIENT

DEPARTMENT OF ADOLESCENT PSYCHIATRY

A Private 82 bed psychiatric hospital located in Oak Cliff on 18 acres amidst natural wooded surroundings. A multi-approach treatment center of neurologic and all psychiatric disorders. Treatment modalities include Somatic Therapy, Milieu Therapy, Chemotherapy, Individual and Group Therapy and Behavior Modification. Complete facilities for OT-RT under the direction of trained personnel. An individually directed program based on full diagnostic evaluation and actual performance administered by a staff skilled in special education and problems of the adolescent and young adult.

PSYCHIATRY

Jackson H. Speegle, M.D.
Fred H. Jordan, M.D.
Joseph H. Lindsay, M.D.
John T. Holbrook, M.D.

PSYCHOLOGY

George R. Mount, Ph.D.
Tom I. Payton, M.S.
Patrick R. Barnes, M.S.

DIRECTOR OF NURSES
Nita Ivey, R.N.

SOCIAL SERVICES
Beth Rutherford, M.S.W.

COURTESY STAFF

DIRECTOR OF EDUCATION
William E. Nix, Ph.D.

O.T. AND R.T. THERAPY
Director
Chequita Dian Badger, B.S.

1353 N. WESTMORELAND AVENUE, DALLAS, TEXAS 75211 **214 331-8331**

Wichita Falls Clinic

501 Midwestern Parkway East, Wichita Falls, Texas 76302

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Clark W. Brazil, M.D.

GENERAL THORACIC AND VASCULAR SURGERY
Cecil H. Meares, M.D.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Richard H. Moore, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOLOGY AND RADIOACTIVE ISOTOPES
Thomas K. Bose, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
Joseph Bilder, Jr., M.D.
George W. Slaughter, M.D.

INTERNAL MEDICINE
P. K. Smith, M.D., F.A.C.P.
I. L. Humphrey, Jr., M.D.
Preston McCall, M.D.
Julian C. Sleeper, M.D., Cardiology
David M. Pogue, M.D., Cardiology
Wendell I. Wyatt, M.D.
Lowell L. Harvey, M.D.

FAMILY PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
James T. Cook, M.D.
Madeleine Kent, M.D.

UROLOGY
John C. Wurster, M.D.

OBSTETRICS AND GYNECOLOGY
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
James M. Missler, Administrator

Starlite Village Hospital

Center Point, Texas

Ph.: 634-2212
634-2213

- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

CHAMPUS APPROVED
JCAH: ACCREDITED.

B.W. CO.® MAKES CODEINE ANALGESICS. YOU MAKE THE CHOICE.

EMPIRIN®
COMPOUND c̄ CODEINE #3

Each tablet contains: codeine phosphate, 32 mg (gr ½), (Warning: May be habit-forming); aspirin, 227 mg; phenacetin, 162 mg; and caffeine, 32 mg. (C III)

The classic codeine pain reliever

For decades, Empirin Compound c̄ Codeine #3 has provided potent analgesia plus the anti-inflammatory action of aspirin for consistently dependable pain relief in the majority of your pain patients. Brand name quality at reasonable cost; readily available in hospital and local pharmacies.

Plus CIII prescribing convenience: up to 5 refills in 6 months (where state law permits), and telephone prescribing permissible in most states. See page 3 of advertisement for prescribing information.

NOW...

LOOKING DIFFERENT CAN BE AS IMPORTANT AS BEING DIFFERENT.

Introducing the peach-colored acetaminophen/codeine tablet

EMPRACET™

c̄ CODEINE #3

Each tablet contains: codeine phosphate, 30 mg (gr ½), (Warning: May be habit-forming); and acetaminophen, 300 mg. CIII

Empracet c̄ Codeine #3: non-aspirin/codeine pain reliever for aspirin-sensitive patients

EMPRACET c̄ Codeine #3 offers you an alternative with advantages for your aspirin-sensitive patients, those with bleeding disorders and "...patients undergoing surgical procedures associated with significant blood loss such as tonsillectomies, open heart surgery, and scoliosis repair...."*

NEW LOOK

Not the same old green and black capsule with a "revised formula." Not a white tablet with aspirin-associations. New peach-colored EMPRACET c̄ Codeine #3 looks different from the leading codeine combination products. It doesn't contain aspirin, so it doesn't look like aspirin—imparting greater reassurance to patients leary of taking it by mistake. It also avoids confusion with other tablets in the household.

NEW NAME

Not a household word, the new name may play a positive role in your pain patient's subjective reaction to your prescription.

EMPRACET c̄ Codeine #3. New look. New name. Psychologically more acceptable to your patients. And with CIII prescribing convenience for you—up to 5 refills in 6 months at your discretion (where state law permits), and telephone prescribing permissible in most states.

*Czapek EE: *JAMA 235*:636, 1976.

EMPIRIN® COMPOUND with CODEINE (C III)

Contraindications: Hypersensitivity to aspirin, phenacetin, caffeine or codeine.

Warnings: See **Warnings** below.

Precautions: ***Allergic:*** Precautions should be taken in administering salicylates to patients with active peptic ulcers and those with known allergies; patients with nasal polyps are especially likely to be hypersensitive to the medication. SEE ADDITIONAL PRECAUTIONS BELOW.

Adverse Reactions: Most frequent adverse reactions are listed below. Some patients taking salicylates develop nausea and vomiting. Hypersensitivity may be manifested by skin rash or anaphylactic reaction. With these exceptions, most side effects occur after repeated administration of large doses; include headache, vertigo, ringing in ears, mental confusion, drowsiness, sweating, thirst, nausea, and vomiting. Occasional patients experience gastric irritation and bleeding with aspirin.

Phenacetin side effects usually result from overdosage. Cyanosis, acute hemolytic anemia, skin lesions, and fever may appear with toxic doses. Continued abuse may lead to renal damage.

Caffeine side effects almost always result from overdosage; include insomnia, restlessness, excitement, tense muscles, and diuresis. Tachycardia and extra systoles may be observed.

EMPRACET™ with Codeine Phosphate, 30 mg, No. 3 (C III)

Contraindications: Hypersensitivity to acetaminophen or codeine.

WARNINGS, PRECAUTIONS, ADVERSE REACTIONS AND DRUG INTERACTIONS COMMON TO BOTH PRODUCTS

Warnings: ***Drug dependence.*** Codeine can produce drug dependence of the morphine type and may be abused. Dependence and tolerance may develop upon repeated administration; prescribe and administer with same caution appropriate to oral narcotics. Subject to the Federal Controlled Substances Act.

Usage in ambulatory patients. Caution patients that these products may impair mental and/or physical abilities required for performance of potentially hazardous tasks such as driving a car or operating machinery.

Interaction with other CNS depressants. Patients receiving other narcotic analgesics, general anesthetics, phenothiazines, tranquilizers, sedative-hypnotics, or other CNS depressants (including alcohol) may exhibit additive CNS depression; when used together reduce dose of one or both.

Usage in Pregnancy. Safe use is not established. Should not be used in pregnant patients unless potential benefits outweigh possible hazards.

Precautions: ***Head injury and increased intracranial pressure.*** Respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a pre-existing increase in intracranial pressure. Narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.

Acute abdominal condition. These products or other narcotics may obscure the diagnosis or clinical course of acute abdominal conditions.

Special risk patients. Administer with caution to certain patients such as elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, or prostatic hypertrophy or urethral stricture.

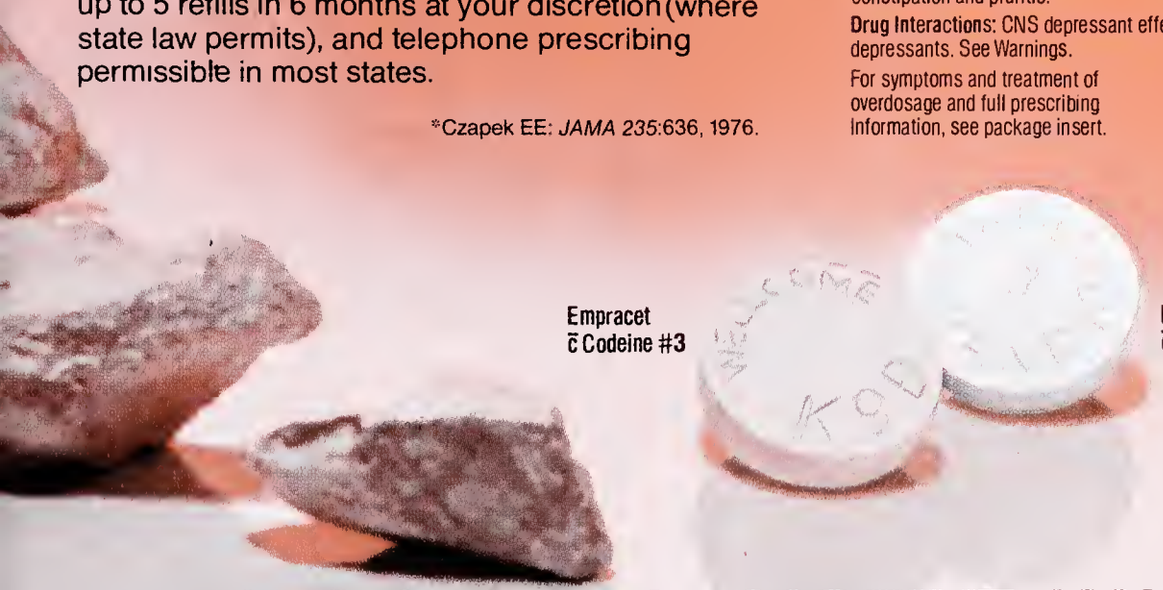
Adverse Reactions: Most frequently include lightheadedness, dizziness, sedation, nausea, and vomiting; more prominent in ambulatory than in nonambulatory patients; some may be alleviated if patient lies down; others include: euphoria, dysphoria, constipation and pruritis.

Drug Interactions: CNS depressant effect may be additive with that of other CNS depressants. See Warnings.

For symptoms and treatment of overdosage and full prescribing information, see package insert.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709



Empracet c̄ Codeine #3

Empirin Compound c̄ Codeine #3

YOUR CHOICE OF CODEINE ANALGESICS FROM BURROUGHS WELLCOME CO.

COLBY PROCLAIMS WOMAN SUFFRAGE

Signs Certificate of Ratification at His Home Without Women Witnesses.

MILITANTS VEXED AT PRIVACY.

Wanted Movies of Ceremony, But Both Factions Are

WASHINGTON, Aug. 26, 1920—

Social Security Bill Is Signed; Gives Pensions to Aged, Job

Roosevelt Approves Message Intended to Benefit 30,0 Persons When States Adopt Cooperating Laws–He the Measure 'Cornerstone' of His Economic Progra

WASHINGTON, Aug. 14 The Social Security Bill, p a broad program of unemp insurance and old age p and counted upon to bene 20,000,000 persons, became day when it was signed b dent Roosevelt in the pres those chiefly responsible f ting it through Congre s.

Mr. Roosevelt call the "the cor erstone in a s which is being built upon i me s c mple ri to

co

SENATE APPROVES 18-YEAR OLD VOTE IN ALL ELECTIONS

Amendment to Constitution is Sent to House, Where Passage is Expected

WASHINGTON, March 10, 1971—The Senate approved today, 94 to 0, and sent to

TRUMAN CLOSES ITED NATIONS CONFEREN WITH PLEA TO TRANSLATE CHARTER INTO DEEDS

NEW WORLD HOPE

President Hails 'Great Instrument of Peace,' Insists It Be Used

HISTORIC LANDMARK

Meeting Gives Standing Ovation as Executive Pictures Peace Gain

"If we fail to use it," he declared to the solemn final meeting of the delegates, 'we shall betray all of those who have died in order that we might meet here in freedom and safety to create it.'

"If we seek to use it selfishly—for the advantage of any one nation or any small group of nations—we shall be equally guilty of that betrayal."

Fervent Interpolation

The President, speaking in the auditorium of the War Memorial Opera House, built in memory of sons of the Golden Gate city who gave their lives in the first World War, in which he himself served, seemed to give unconscious expression to the solemn feeling of the occasion when, at the outset of his speech, he interpolated the words, half a hope, half a prayer:

"O, what a great day this can be in history!"

SIGNS the Draf Ends No

WASHINGTON, Jan. 27, 1973—"With the signing of the peace agreement in Paris today, and after receiving a report from the

PATIENT PACKAGE INSERTS: A CONCEPT WHOSE TIME HAS COME?

The consumer's right to know is an irreversible and desirable trend of the Seventies. It extends, and properly, to a patient's right to know more about his or her prescription medications. One way, gaining favor, is through patient package inserts. Wisely-prepared and properly distributed when medically indicated, they could markedly improve patient knowledge and drug therapy—laudable goals by anyone's standards.

The PMA endorses these goals and will work with government, the health professions and consumers to achieve them.

The Advantages

The concept holds promise of benefits: better patient understanding of the product prescribed, better adherence to the treatment plan, and more awareness of possible side reactions.

Every doctor has had patients who fail to finish antibiotic regimens because they feel better. Some patients assume that if one tranquilizer or analgesic is good, two may be twice as good. Still others fail to report dizziness while on antihypertensive therapy —and so on.

Problems like these might arise less often if the patient received written information in addition to verbal instructions. Some studies suggest that patients are more receptive to such materials, and they more often understand the verbal instructions and follow them, when inserts are used.

The Disadvantages

There are also some potential problems. Obviously, the inserts must be clearly phrased, without extraneous or complex detail. How much information is enough? How can it be kept current? Should all patients receive the same information? Should inserts be included with all drugs? Should only potential problems be listed or are patients better off with a "fair balance" presentation that describes usefulness as well as drawbacks?

These and similar questions require answers, since model inserts have yet to be properly developed and tested. Despite the need for these studies, the FDA is proceeding prematurely with inserts on selected products. We think the Congress is the only place where the matter can be given the proper legal status and direction, particularly since it represents a conceptual change in the legal, medical and social framework of the nation's prescription drug information system.

The Solution

The PMA believes that carefully-devised pilot studies of various kinds of inserts are needed. They should be developed and implemented with full participation by doctors, pharmacists, consumers, communications experts and the drug industry. Such studies will provide reliable pathways to follow, so that inserts will be useful aids to medical practice.

And particularly we think that you should be closely involved in this debate and in these studies and decisions. Otherwise, people with less experience and qualifications may control the purposes, content and use of a tool with considerable promise for improved patient care. It could make a difference in your practice tomorrow, and more importantly, in the health of your patients.

PMA
THE PHARMACEUTICAL MANUFACTURERS ASSOCIATION
1155 FIFTEENTH ST., N. W., WASHINGTON, D. C. 20005

Arthritis minimal care unit: evaluation of the first year

This is a report of the experience gained during the initial year's operation of an Arthritis Minimal Care Unit. The program was valuable in maintaining patient independence and enlisting family support in the patient's program. The average treatment time was approximately one-half that required for comparable patients in a general hospital. This interdisciplinary approach to the management of the arthritis patient not only improved care, but allowed the arthritis unit to be an effective teaching module. This pilot program and team approach to patient management serves as the basis for a comprehensive arthritis program at The University of Texas Medical Branch at Galveston.

One of the many forms of arthritis affects a large segment of the population of this country. According to recent estimates, one person out of every ten will experience the symptoms of arthritis at some time during their lives.[1] The impact of arthritis upon an individual is determined by the type of arthritis, its clinical course, and the person's response to the disease.

Arthritis, unlike many diseases, is not life threatening. Afflicted people usually continue to function within the family and work environment. However, the arthritis patient often encounters long-term problems requiring considerable patience, understanding of the disease process, and the ability to compromise and adjust goals without developing feelings of defeat and dependence upon others.

Realistic goals which are necessary in planning any arthritis management program should be determined only after a full medical and functional assessment. Such goals must be specific for each patient and acceptable to that patient, his family, and the professionals involved with the care.

Rationale for the Minimal Care Concept

Arthritis patients need to be in a general hospital setting for medical evaluation, acute-care management or surgery. However, assessment of the patient's functional level, establishment of realistic goals, institution of training programs, and patient education can be performed in a minimal care hospital setting.[2] To the extent that individual independence should be fostered and maintained, care for the patient with arthritis who does not have an acute medical or surgical problem is compromised in a general hospital. For this reason, an Arthritis Minimal Care Unit (AMCU) was developed on a pilot basis at The University of Texas Medical Branch at Galveston.

Background

In February of 1974, funds for pilot arthritis centers were made available through the Regional Medical Programs. A coordinated statewide arthritis program with representation from five institutions within the state was developed; and as a result, a comprehensive arthritis program at The University of Texas Medical Branch at Galveston was initiated. In September of 1974, an arthritis team was selected which would give a multidimensional approach to patient care. In October of 1974, with the assistance of a Regional Medical Program contract, the Arthritis Minimal Care Unit was opened.

Program Operation

The minimal care unit was established in a building separate from the main hospital but on the grounds of the medical complex.

Frank E. Emery, MD
Jerry C. Daniels, MD, PhD
Rosalie Lopopolo, MA, LPT
Beryl Fernandez, OTR
William T. Fischer

The facility was conveniently located near the hospital, restaurants, shopping areas, and recreational areas. The rooms were similar to those in a modern motel, each having a private bathroom. Doors within the unit had ample width to accommodate entry by a wheelchair. Seven rooms were available, four of which were set up for double occupancy to allow a family member to stay with and be trained with the patient for future home care. Two treatment rooms were set up and equipped for physical therapy and occupational therapy. An administrative office was also located in the facility, with a secretary who maintained patient records and coordinated patient care activities.

The AMCU was administered by team members representing internal medicine, orthopedic surgery, physical therapy, and occupational therapy. Each team member was responsible to the entire program for input from his respective discipline. When patients, whether inpatients or outpatients, were referred for evaluation by the arthritis team, they were assessed simultaneously by all team members. The team then agreed upon and outlined a suitable program for each patient. The patient was followed closely throughout the program whether he was admitted to the general hospital or to the minimal care unit. Patients admitted to the AMCU were not officially admitted to the general hospital, but were considered to be outpatients. Separate patient records were maintained in the AMCU to expedite care. However, entries were made in the official hospital record to maintain documentation of the continuity of care.

Results

Patients from the AMCU were matched in terms of disease severity, surgery performed, and attained functional level with patients from the general hospital. Treatment effectiveness was judged in terms of the length of stay for patients admitted to the AMCU as compared to the length of stay for patients in the general hospital. The average length of stay for patients in the AMCU was 7.1 days as compared to 16.8 days in the general hospital. Therefore, 50% less time was needed to reach a comparable functional level by patients in the AMCU than was needed by those in the hospital setting.

Financially, when consideration is given to the eight-bed unit which was utilized for this study, the average cost per day of $74.64 was not too different from the cost which would have been incurred had the patient occupied a two-bed hospital room. A semiprivate room at The University of Texas Medical Branch with physical therapy services is $76 per day.

Where the cost advantage is minimal in terms of a daily rate, a completely different result is apparent when length of stay is considered. The average stay in the special unit (7.1 days) cost the patient $529.24. The average stay in the general hospital (16.8 days) cost $1,276.70, or $746.86 more than at the special unit.

Calculations of the cost of operating the special unit indicated that an eight-bed unit is marginal in size, for the critical mass of labor required is such that marginal productivity is quite apparent. Extrapolations to determine the optimum size of such a unit have not been completed, but estimates now indicate that a 14-18 bed unit could be maintained with the same labor force required for the eight-bed unit.

Patients staying in the unit completed a questionnaire before discharge, and the most consistent comment was that there was less stress and much more tranquility in the unit than in the general hospital. All patients appreciated the fact that a family member could be included in the treatment program and many appreciated the feeling of independence and self-reliance fostered in the unit. Other comparisons of the two settings and highlights of

some of the more obvious benefits of the minimal care approach other than cost control and patient satisfaction are summarized in Fig 1.

The arthritis team also discovered that the minimal care unit solved some of the rehabilitation problems that develop in a general hospital setting.[3] A philosophy and the principles of rehabilitation were developed and accepted by all team members. Communication between departments had been improved. Realistic goals could be established for the patient with the patient and his family's participation. And finally, the AMCU served as an effective teaching module for the team approach and the minimal care concept.

Conclusion

Our one-year experience with the minimal care concept in arthritis, using an interdisciplinary team working within a minimal care hospital setting equipped for rehabilitative care, has been favorable. The average patient treatment time was significantly decreased when compared with that required by comparable patients in the general hospital setting. This resulted in a substantial cost savings. Attitudes of independence and self-reliance and family support were fostered in the patients and their families. Additional benefits were realized by the institution in the form of increasing productive interdisciplinary interactions, demonstrating an effective teaching module for students in many health disciplines, and establishing the basis for a comprehensive care program for patients with arthritis.

References

1. Mikkelsen WM: The epidemiology of rheumatic diseases in: Hollander JL, McCarty DJ, eds: Arthritis and allied conditions, 8th ed. Philadelphia, Lea & Febiger, p 211, 1972.
2. Duff IF, Captenter JO, Heukon JE: Comprehensive management of patients with rheumatoid arthritis. Arthritis Rheum 17:635, 1974.
3. Echternach JL: Problems of rehabilitation in a general hospital. Phys Ther 33:417, 1958.

Supported in part by the Regional Medical Program in Arthritis of the State of Texas.

Frank E. Emery, MD; Jerry C. Daniels, MD; Rosalie Lopopolo, MA; Beryl Fernandez, OTR; William T. Fischer, Department of Surgery, The University of Texas Medical Branch, Galveston, TX 77550.

1. Comparison of arthritis minimal care unit with general hospital setting.

Arthritis Minimal Care Unit	General Hospital Setting
Patient independent	Patient dependent on hospital staff
Family inclusion in total program	Family excluded from daily activities
Reasonably realistic lifestyle	Unrealistic enforced lifestyle
Daily tasks must be undertaken by patient	Tasks performed for patient
Medication must be programmed by patient	Medication programmed and provided by hospital staff
Individualization of patient care	Institutionalization of patient care
Requires decisions and planning of daily activities by patient	No structured planning or day-to-day decisions required of patient
Association with other persons with arthritis	Surrounded by random patients with various illnesses
Ready access to physical therapy appliances and occupational therapy materials	Limited, controlled access to physical therapy appliances and occupational therapy materials
Patient education materials readily available	Patient education materials must be made available
Avoids feelings of confinement and tendency toward invalidism	Patient confined, tendency toward feelings of invalidism
Encounters personnel familiar with the arthritic and his or her specific problems	Encounters personnel who may or may not understand the arthritic condition in depth

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

TEXAS REPRESENTATIVES

A. F. Ennis, Jr. and B. C. Crim, Suite 210, 712 N. Washington, Dallas 75246	Telephone (214) 821-4640
W. L. Kirk, 1508 Hermann Prof. Bldg., Houston 77030	Telephone (713) 797-9835
M. C. Rollons, 408 GPM Bldg., South Tower, San Antonio 78216	Telephone (512) 344-5901

KELSEY-SEYBOLD CLINIC

TEXAS MEDICAL CENTER • 6624 FANNIN STREET • HOUSTON, TEXAS 77030 • AC (713) 797-1551

INTERNAL MEDICINE

Allergy
C. W. Ewing, M.D., F.A.C.A.
S. Weakley, M.D.

Arthritis and Rheumatic Diseases
J. W. Kemper, M.D., F.A.C.P.
M. S. Fischer, M.D.

Cardiology
E. F. Beard, M.D., F.A.C.P.
D. D. Goulden, M.D.
M. J. Mihalick, M.D.

Endocrine and Metabolic Diseases
M. P. Kelsey, M.D., F.A.C.P.
A. E. Leiser, M.D., F.A.C.P.
P. K. Champion, Jr., M.D., F.A.C.P.

Gastrointestinal Diseases, Endoscopy
J. R. Kelsey, Jr., M.D., F.A.C.P.
P. S. Bentlif, M.D., F.A.C.P.
R. D. Eichhorn, M.D., F.A.C.P.
F. S. O'Neil, M.D., F.A.C.P.
J. W. McBee, M.D., F.A.C.P.

General Internal Medicine
G. E. Burke, M.D.
C. F. Taboada, M.D., F.A.C.P.
N. H. Nauert, Jr., M.D.
G. G. Bourianoff, M.D.
G. Crofoot, M.D.

Hematology
J. B. Bart, M.D., F.A.C.P.

Infectious Diseases
S. Riggs, M.D., F.A.C.P.

Nuclear Medicine
D. E. Mouton, M.D., F.A.C.N.M.

Oncology
E. N. Root, M.D.

Pulmonary Diseases, Bronchoscopy
S. P. Fischer, M.D., F.A.C.P.
B. D. Walker, M.D.

DERMATOLOGY

W. M. Fraser, M.D., F.A.A.D.
D. W. Owens, M.D., F.A.A.D.

GENERAL & THORACIC SURGERY

Surgical Endoscopy & Colonoscopy
W. D. Seybold, M.D., F.A.C.S.
J. D. McMurrey, M.D., F.A.C.S.
J. L. Doggett, M.D., F.A.C.S.
M. F. Appel, M.D., F.A.C.S.

NEUROLOGY

W. R. Seybold, M.D.

OBSTETRICS & GYNECOLOGY

M. L. Cody, M.D., F.A.C.S., F.A.C.O.G.
W. A. Johnson III, M.D., F.A.C.O.G.
A. G. Guette, M.D.

OCCUPATIONAL & PREVENTIVE MEDICINE

M. B. Johnston, M.D., F.A.C.Pr.M.
W. B. Dye, M.D., F.A.C.Pr.M.
H. B. Elwell, Jr., M.D.
R. M. Fenno, M.D., F.A.C.P.
F. A. Goss, M.D.
W. R. Hawkins, M.D., F.A.C.Pr.M.
W. R. Hein, M.D., F.A.C.Pr.M.
L. A. Herrmann, M.D.
G. F. Kelly, M.D., F.A.C.Pr.M.
J. Mackay, M.D.
C. A. Owen, M.D., F.A.C.S.
B. W. Prior, M.D., F.A.C.Pr.M.
N. A. Tadros, M.D., F.A.C.Pr.M.
A. M. Wyss, M.D., F.A.C.Pr.M.
R. J. Huebner, M.D.
T. K. Lee, M.D., M.P.H.

OPHTHALMOLOGY

H. E. Wahlen, M.D., D.A.B.O.
J. E. Key, II, M.D., D.A.B.O.

ORTHOPEDIC SURGERY

R. A. Fulford, M.D., F.R.C.S. (C)
T. H. Crouch, M.D., F.A.C.S.

OTOLARYNGOLOGY

J. C. Dickson, M.D., F.A.C.S.
J. L. Smith, M.D., F.A.C.S.
L. P. Conrad, M.D.

PATHOLOGY

R. A. Jordan, M.D., F.A.S.C.P.

PEDIATRICS

Rheumatology
E. J. Brewer, Jr., M.D., F.A.A.P.

Allergy and Pulmonary Diseases
C. W. Ewing, M.D., F.A.A.P.

Gastroenterology
G. D. Ferry, M.D., F.A.A.P.

General Pediatrics and Consultation
F. J. Boland, M.D., F.A.A.P.
R. M. Thaller, M.D., F.A.A.P.
K. C. Pinckard, M.D.

PSYCHIATRY

C. G. Cochran, M.D.
R. Daichman, M.D.

RADIOLOGY

R. J. Kurth, M.D., F.A.C.R.
E. G. Linares, M.D.
P. Raphael, M.D.
T. P. Connolly, M.D.

UROLOGY

D. W. Pranke, M.D., F.A.C.S.
F. M. Fry, M.D.

DENTISTRY

J. W. Orr, D.D.S.
D. L. McClung, D.D.S.

SPEECH PATHOLOGY & AUDIOLOGY

D. R. Fox, Ph.D.
J. W. Porter, M.A.
N. Shulak, M.A.

EXECUTIVE DIRECTOR

J. A. Bakken, F.A.C.M.G.A.

K-S WEST

1111 Augusta Drive
Houston, Texas 77057
(713) 780-1661

K-S DOWNTOWN

Two Houston Center, Suite P-310
909 Fannin Street, Houston, Texas
77002 (713) 654-4401

Technetium-99m stannous pyrophosphate myocardial scintigraphy in the recognition of acute subendocardial myocardial infarction

We evaluated 179 patients admitted to the coronary care unit with chest pain of varying etiology but without electrocardiographic evidence of transmural myocardial infarction and without the clinical syndrome of unstable angina pectoris. Of these, 128 had negative, and 51 had positive, technetium-99m stannous pyrophosphate myocardial scintigrams (^{99m}Tc-PYP). In most of the patients with positive ^{99m}Tc-PYP scintigrams, the myocardial scintigram was characterized by poorly localized (2+) uptake of ^{99m}Tc-PYP. Forty-four patients had an evolutionary change in one or more cardiac enzymes in association with electrocardiographic alterations of ST and T waves suggestive of acute subendocardial myocardial infarction. Seven patients had positive ^{99m}Tc-PYP scintigrams and electrocardiographic alterations of ST and T waves consistent with subendocardial myocardial infarction or ischemia, but in these patients peak serum enzyme values did not exceed the upper limits of normal. In 127 of the 128 patients with negative ^{99m}Tc-PYP myocardial scintigrams, neither electrocardiographic nor enzymatic evidence of myocardial infarction developed; the remaining patient did have ST and T wave alterations on ECG and elevated serum creatine phosphokinase levels consistent with a diagnosis of acute subendocardial infarction. The data suggest that ^{99m}Tc-PYP myocardial scintigrams recognize acute subendocardial myocardial infarction in nearly every patient with ECG and/or enzymatic evidence of this type of infarction. The data obtained in this study raise the as yet unanswered question as to whether the ^{99m}Tc-PYP scintigram may be more sensitive than enzymes and more specific than ECGs in identifying acute subendocardial infarction.

The subendocardium is an area of particular vulnerability to ischemic damage. It is a region of high metabolic activity and oxidative demand, of comparatively high wall tension but lower basal oxygen pressure than other myocardial regions.[1-5] The clinical diagnosis of acute subendocardial myocardial infarction is usually substantiated by a typical clinical history and an evolutionary pattern of serum cardiac enzymes. Generally speaking, deep ST segment depression and T wave inversion that persists for at least a few days also is suggestive of, but not necessarily specific for, acute subendocardial myocardial infarction. At times, however, the diagnosis of acute subendocardial infarction can be an exceedingly difficult one to make with certainty. A typical history of pain may not be elicited in some individuals. Elevation of serum enzymes may be comparatively mild and may only involve one of the serum cardiac enzymes; these two phenomena presumably are associated with quantitatively small loss of muscle mass in the subendocardial region. Many other factors also may alter or produce serum enzyme elevation including intramuscular injections, trauma, congestive heart failure and liver disease. The electrocardiographic findings as well are not specific for subendocardial infarction and may in some circumstances be related to myocardial ischemia, metabolic derangement, central nervous system hemorrhage, tachycardia, hyperventilation, etcetera. Therefore, it seems possible and indeed autopsy data suggest, that clinically undetected subendocardial necrosis may occur with some frequency in patients.[6-9] It would be useful to establish additional diagnostic means of verifying subendocardial infarction. Accordingly, we have extended our previous observations[10] to further evaluate the abil-

Lawrence R. Poliner, MD
Robert W. Parkey, MD
L. Maximilian Buja, MD
Ernest M. Stokely, PhD
Frederick J. Bonte, MD
James T. Willerson, MD

ity of ^{99m}Tc-PYP myocardial scintigrams to recognize acute subendocardial infarction in patients with chest pain.

Methods

In this study, 179 patients admitted during 16 months to the coronary care unit at Parkland Memorial Hospital in Dallas with chest pain suggestive of myocardial infarction were evaluated. ECG evidence of acute transmural myocardial infarction did not develop in any of these patients, and none had the clinical syndrome of unstable angina pectoris.

The patients were studied at their bedsides in the coronary care unit. A portable Nuclear Data scintillation camera was used within the first few days after admission. Some patients also had myocardial scintigrams performed in the nuclear medicine department, where a Searle Radiographics Inc. Pho/Gamma HP scintillation camera with a 16,000 hole "high resolution" collimator was used. This scintillation camera is interfaced to a PDP-8I computer with 32 K of core. Images were placed on nine-track magnetic tape for later retrieval. The computer processing utilizes image enhancement to help define the lesion precisely. Each patient had scintigrams in the anterior, lateral, and one or more left anterior oblique projections approximately one hour after the intravenous injection of 5 mg of stannous pyrophosphate (PYP)* tagged with 15 mCi of ^{99m}Tc, with continuous ECG monitoring. Informed consent was obtained from each patient. Neither arrythmia nor obvious side effects were observed from either the injection of the radionuclide or from the imaging process itself. The imaging time for three to five views was approximately 15 minutes.

The initial myocardial images were obtained one to four days after the onset of chest pain suggesting possible myocardial infarction. The majority of the patients studied had two ^{99m}Tc-PYP myocardial scintigrams; often one was performed 24-48 hours after chest pain began, and another was obtained 72-96 hours after the onset of the chest discomfort. The scintigrams were graded from 0 to 4+, depending on the activity over the myocardium, by one of the authors (RP) who had no prior knowledge of the patient's clinical condition. Zero represented no activity and a negative myocardial scintigram; 1+ represented questionable activity; 2+ represented definite but faint activity and a positive myocardial scintigram; 3+ and 4+ represented obviously increased and markedly positive uptake of ^{99m}Tc-PYP on the myocardial scintigram.[10-12] In this study as well as in previous ones,[10-13] we have regarded 2-4+ myocardial scintigraphic uptake as representing a positive myocardial scintigram. In positive scintigrams, the area of increased uptake was also evaluated as to location and described as being anterior, inferior, lateral, true posterior, or poorly localized. The term "poorly localized" was used to describe increased ^{99m}Tc-PYP uptake that could not be seen on all three views, making precise localization difficult, or when there was a relatively diffuse uptake of ^{99m}Tc-PYP that could not be localized to one specific area, or when both conditions were present.

Results

In the 179 patients that were studied, 51 had positive ^{99m}Tc-PYP myocardial scintigrams. The mean age of this group of

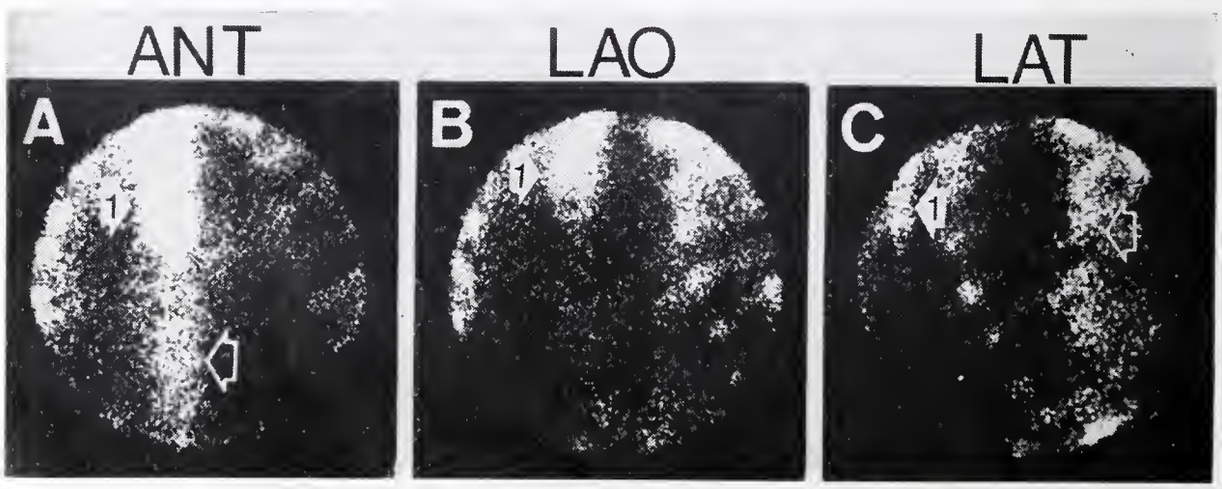
*MP4018 (Stannous pyrophosphate), Mallinckrodt Chemical Works, St Louis, Mo.

patients was 61 years. Among these 51 patients there were 44 who had typical evolution of their serum creatine phosphokinase (and in most instances also the SGOT enzyme) levels in association with ST segment depression and/or T wave inversion suggestive of recent subendocardial myocardial infarction. Forty-two of the 44 patients presented with severe prolonged chest pain characteristic of acute myocardial infarction. Two were admitted with severe congestive heart failure associated with tachyarrhythmias. One of these two patients had ventricular tachycardia and the other had respiratory arrest associated with pulmonary edema and, subsequently, supraventricular tachycardia. The positive ^{99m}Tc-PYP myocardial scintigrams in these patients ranged in grade from 2+ to 4+ (Figs 1-3). Most patients (34) had ^{99m}Tc-PYP myocardial scintigrams demonstrating 2+ uptake that was not well localized. This poorly localized pattern of ^{99m}Tc-PYP uptake could be distinguished from the more extensive blood pool image which, in our institution, is considered as a technically artifactual false-positive scintigram (Fig 4). The remaining patients had a more demarcated area of increased ^{99m}Tc-PYP uptake that was more intensely positive than that noted with the less well localized ^{99m}Tc-PYP scintigraphic pattern. One of these patients died and the postmortem myocardial findings are shown in Fig 5.

Seven patients (average age 57) presented with positive ^{99m}Tc-PYP myocardial scintigrams and with abnormal ECGs consistent with acute subendocardial ischemia or infarction, but in these patients peak serum enzyme values did not exceed the upper range of normal. Six were women and each presented with a single prolonged episode of chest pain clinically suggestive of myocardial infarction or severe coronary insufficiency. The remaining patient was a man with angiographically documented severe coronary artery disease and compensated congestive heart failure; he presented to the hospital with a tachyarrhythmia. The ^{99m}Tc-PYP myocardial scintigrams demonstrated 2+ ^{99m}Tc-PYP uptake in these patients; the increased ^{99m}Tc-PYP uptake was poorly localized in six and well localized in one.

Of the 128 patients with negative ^{99m}Tc-PYP myocardial scintigrams, 127 also did not have either enzymatic or electrocardiographic evidence of acute myocardial infarction. In these 127 patients there were a variety of etiologies accounting for the chest pain. Most of the patients were thought to have angina pectoris as the cause of their chest pain. The remaining

1. A negative technetium-99m stannous pyrophosphate myocardial scintigram demonstrating the uptake in bony structures, but no myocardial activity. A. Anterior view; B. left anterior oblique view; C. lateral view. The sternum is indicated by the opaque arrowhead with the numeral, while the transparent arrow points to the spine. Uptake is also seen in the ribs.

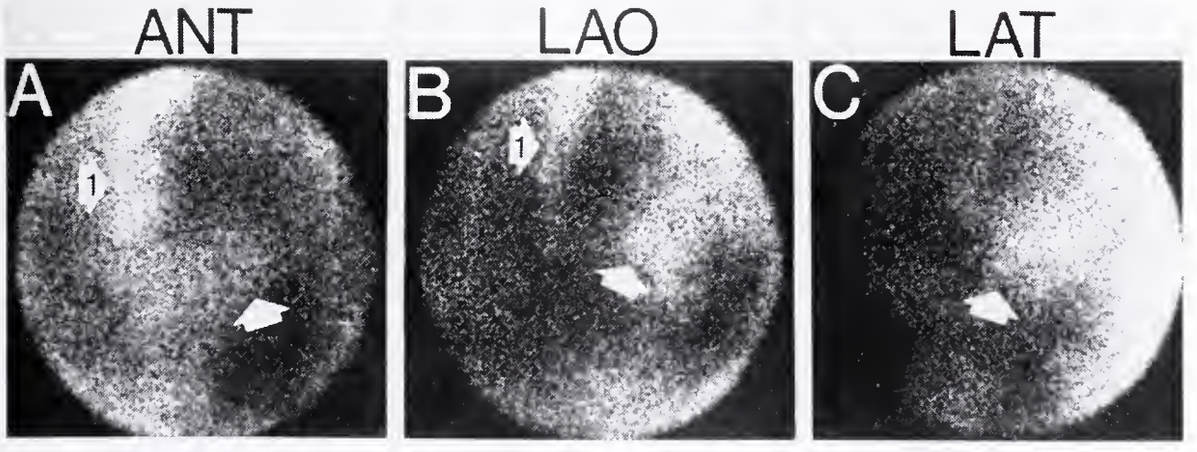


patient had a negative ^{99m}Tc-PYP myocardial scintigram; she was an 83-year-old woman with chest pain, elevated serum creatine phosphokinase, and diffuse T-wave inversion on the ECG. She was treated as if she had an acute subendocardial myocardial infarction.

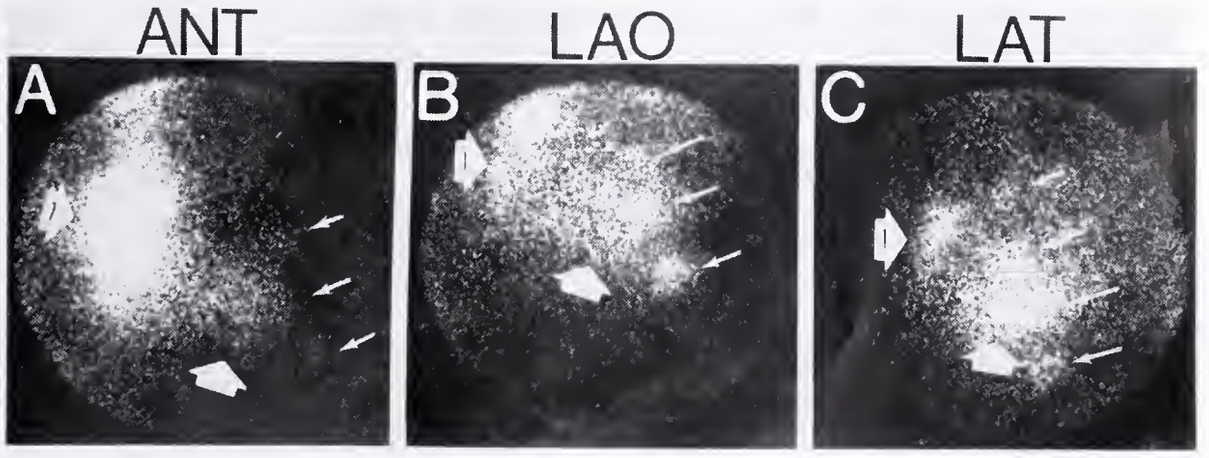
Discussion

Although the subendocardial region of the myocardium is an area of high ischemic risk, the occurrence of subendocardial damage can at times be difficult, clinically, to define with certainty. There is evidence to suggest that subendocardial myocardial infarction may occur more frequently than has been previously recognized.[6-9] Difficulty with identification of acute subendocardial infarction may relate to several factors. Historical information may be atypical, enzymatic rise may be mild involving only one of the serum cardiac enzymes, and the enzymatic pattern can be distorted for various reasons. It does appear, however, that the "myocardial specific" creatine phosphokinase myocardial isoenzyme (MB isoenzyme) may be of more help than some of the others in establishing a precise diagnosis of myocardial infarction.[14] Electrocardiographic findings are not specific for acute subendocardial myocardial infarction and occasionally can be simulated by subendocardial ischemia, tachy-

2. Technetium-99m stannous pyrophosphate myocardial scintigram that demonstrates 2+ increased uptake of the radionuclide inferiorly and laterally, indicated by the opaque arrowhead. A. Anterior view; B. left anterior oblique view; C. left lateral view. The sternum is marked by the arrowhead with the numeral 1.



3. Technetium-99m stannous pyrophosphate myocardial scintigram that demonstrates 3-4+ uptake that is poorly localized. The various projections are the same as shown in Fig 1. The large arrow (A) with the numeral 1 points to sternal uptake of ^{99m}Tc-PYP; the large arrow without the numeral points to the infarct, and the small arrows point to increased uptake of ^{99m}Tc-PYP in ribs. Notice that as the patient is rotated (B and C) the rib and sternal uptake of ^{99m}Tc-PYP can be separated from the infarct.

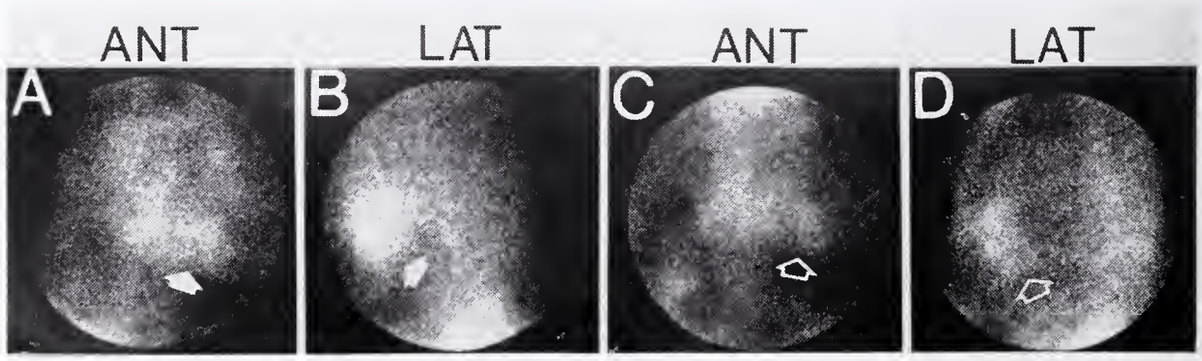


cardia, left ventricular hypertrophy and strain, and/or certain medications, particularly cardiac glycosides. Patients with acute subendocardial myocardial infarction need to be distinguished from those with myocardial ischemia or with chest pain of other etiologies.

The information obtained in the present study suggests that the ^{99m}Tc-PYP myocardial scintigrams offer additional assistance in establishing the diagnosis of acute subendocardial myocardial infarction in patients. ^{99m}Tc-PYP myocardial scintigrams yield positive readings as ^{99m}Tc-PYP becomes localized within the damaged myocardial tissue. This presumably is caused at least in part by incorporation of pyrophosphate into calcium complexes which are themselves deposited within irreversibly damaged myocardial cells.[10-13,15] ^{99m}Tc-PYP myocardial scintigrams in experimental animals and in man can be graded positive approximately 12-14 hours after infarction, and appear increasingly positive within the first 24-72 hours after infarction.[12,15] The ^{99m}Tc-PYP then fades and in most, but not all patients and experimental animals, scintigrams will be negative 6-12 days following acute myocardial infarction.[10-13,15] The changes with time in the intensity of ^{99m}Tc-PYP uptake provide the strongest reason to obtain serial myocardial images of patients when the clinical suspicion of infarction is strong. In the present study all but one of the patients with characteristic electrocardiographic and enzymatic evidence of acute subendocardial myocardial infarction had positive ^{99m}Tc-PYP myocardial scintigrams.

The data in our present and previous studies have shown that a variety of patterns may be observed in the ^{99m}Tc-PYP myocardial scintigrams of patients and experimental animals after acute myocardial infarction (Fig 6).[10-13,15] Localized ^{99m}Tc-PYP uptake, either in a homogeneous distribution or in a doughnut configuration,[12,15] is typical of acute transmural myocardial infarcts, but the homogeneous localized pattern also may occur in a few patients with acute subendocardial myocardial infarction (Fig 6).[10-12] In most patients with acute subendocardial infarcts, however, the typical ^{99m}Tc-PYP scintigram demonstrates 2+ increased uptake of ^{99m}Tc-PYP that is diffuse or poorly localized. In these patients the increased ^{99m}Tc-PYP uptake is sometimes noted in only one or two projections and often the increased ^{99m}Tc-PYP uptake is relatively faint, thus making precise localization difficult. We believe, however, that the poorly localized patterns of ^{99m}Tc-PYP uptake represent

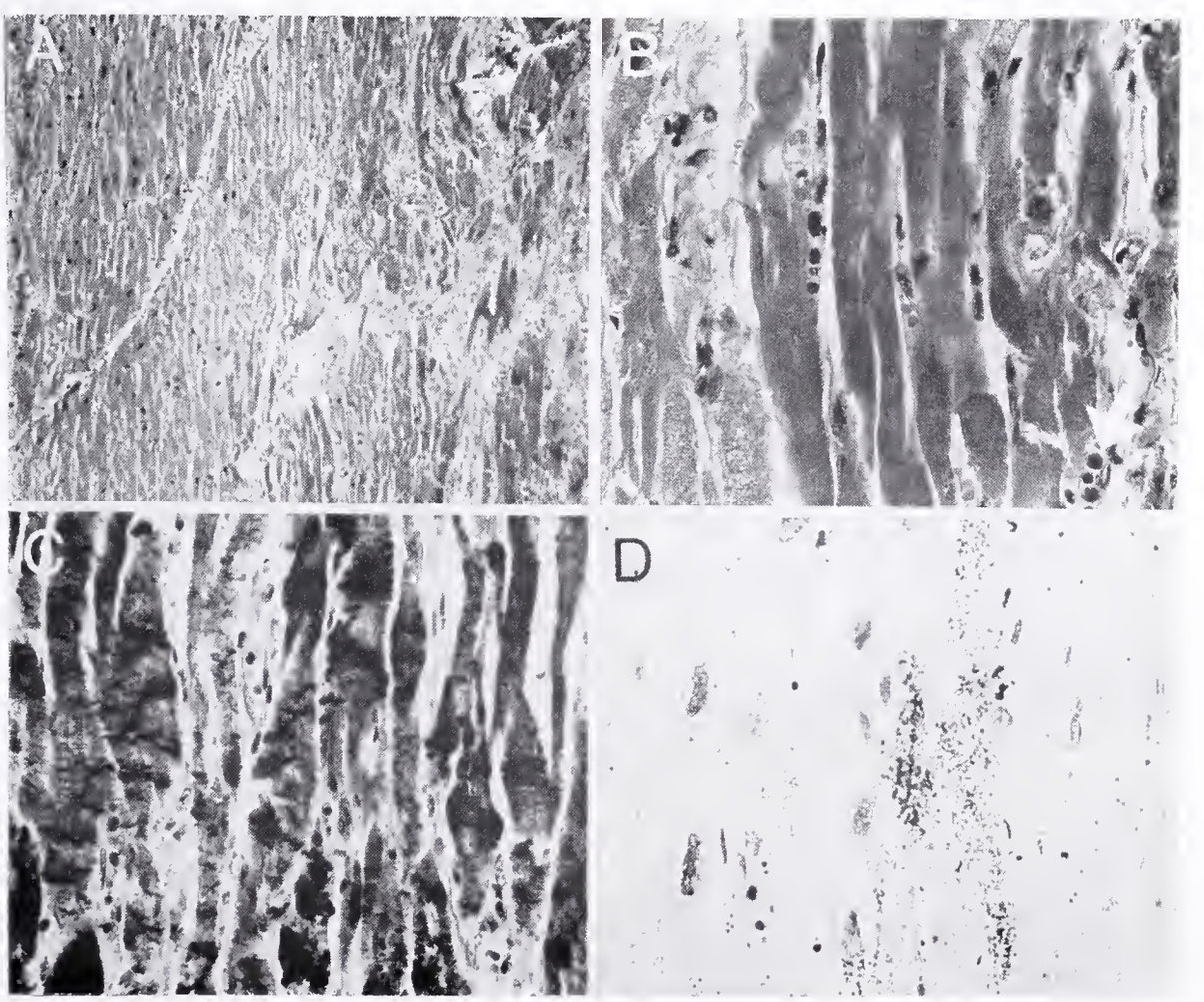
4. Technetium-99m stannous pyrophosphate myocardial scintigrams obtained from the same patient. The first two panels on the left (A and B) represent the anterior and lateral views that demonstrate the radioactive blood pool images shown by the opaque arrowhead. Note that the great vessels and left ventricle cavity can be seen and that the area of increased ^{99m}Tc-PYP uptake appears continuous with the sternum. In the two panels on the right (C and D) the anterior myocardial infarct is shown with the increased uptake of ^{99m}Tc-PYP being confined to a much smaller anterior region (transparent arrowhead). The scintigraphic views in the two panels on the right correspond to the ones shown in A and B.



true increased myocardial uptake of the ^{99m}Tc-PYP which is different from radioactive blood pool activity. The radioactive blood pool images typically show a much larger area of activity than the relatively discreet but poorly localized pattern of increased ^{99m}Tc-PYP in patients with acute subendocardial infarction (Fig 4). Furthermore, the blood pool image shows extensive overlapping with the ^{99m}Tc-PYP activity in the sternum, a feature not seen with the typical acute subendocardial infarct images.

The reason for the relatively poorly localized uptake of ^{99m}Tc-PYP in many patients with acute subendocardial infarcts is uncertain. Previous necropsy studies[7,8,16-21] have shown that acute subendocardial infarcts in patients usually occur in association with significant coronary atherosclerosis but in the absence of acute coronary occlusion, and that such infarcts may be of two types: (1) relatively small subendocardial infarcts with a limited regional distribution, and (2) large, circumferential or nearly circumferential subendocardial infarcts. Both types of infarcts may be either patchy or confluent. Clinical symptomatology associated with the two types of infarcts is highly variable, and the extent of subendocardial infarction does not necessarily correlate with the presence or sever-

5. Histopathologic findings in a patient with subendocardial infarction and a positive ^{99m}Tc-PYP myocardial scintigram with homogeneous and localized radionuclide uptake in the region of the lateral left ventricle. A. Low magnification view of lateral left ventricular myocardium. To the left there is normal subepicardial myocardium. The subendocardial myocardium to the right shows pale, amorphous areas of fibrosis as well as densely stained, necrotic muscle cells. B. Area of necrotic myocardium at higher magnification. The necrotic muscle cells are devoid of nuclei and have densely stained, homogeneous sarcoplasm. Neutrophilic infiltrate is present (arrowhead). C. The Masson's trichrome stain reveals disruption of myofibrils and contraction band formation in the necrotic muscle cells. D. With the von Kossa stain for calcium salts, many necrotic muscle cells exhibit granular calcium deposits. A, hematoxylin and eosin stain, X 43.2; B, hematoxylin and eosin stain, X 270.4; C, Masson's trichrome stain, X 270.4; D, von Kossa stain for calcium salts, X 328.



ity of generalized circulatory impairment, such as congestive heart failure or shock.[7,8,16-19] Thus, available clinicopathological data are compatible with the thesis that the poorly localized 2+ ^{99m}Tc-PYP scintigraphic pattern in many of the patients with acute subendocardial infarcts in the present study resulted from extensive, multifocal myocardial necrosis in the subendocardium.

One patient in this series had elevated serum creatine phosphokinase levels and diffuse ST-T wave abnormalities on the ECG consistent with her having an acute subendocardial myocardial infarction but a negative ^{99m}Tc-PYP myocardial scintigram. This may have represented a false-negative ^{99m}Tc-PYP scintigram.

There were an additional 7 patients with positive ^{99m}Tc-PYP myocardial scintigrams and electrocardiographic changes consistent with a diagnosis of acute subendocardial infarction in whom peak serum enzyme values were normal. Six of the 7 were females who had experienced a single severe episode of prolonged chest pain suggestive of myocardial infarction or severe coronary insufficiency. The remaining patient was admitted with a tachyarrhythmia; severe coronary artery disease had previously been angiographically documented in this person. The positive ^{99m}Tc-PYP scintigrams in these 7 patients might have represented false-positive scintigraphic results or might have been positive as a result of severe myocardial ischemia without irreversible myocardial cellular injury having occurred. It is also possible, however, that each of these individuals had quantitatively small subendocardial myocardial infarcts not reflected in serum enzyme alterations. Additional studies should settle this issue, but it does remain to be further defined whether severely and perhaps chronically ischemic myocardial tissue may in some circumstances take up increased amounts of ^{99m}Tc-PYP. In the present study, however, there was not increased myocardial uptake of ^{99m}Tc-PYP in the 127 patients admitted with angina or with chest pain of etiology other than acute subendocardial infarction.

6. ^{99m}Tc-PYP myocardial scintigraphic patterns.

Localized Patterns of Increased 99mTc-PYP Uptake:

1. Homogeneous (3-4+ uptake): Acute transmural myocardial infarcts in all locations - anterior, inferior, lateral, true posterior and, occasionally, acute subendocardial myocardial infarcts
2. Doughnut (3-4+ uptake): Anterior or anterolateral acute transmural myocardial infarcts
3. Evolution of transmural infarcts (2+ well localized either in first few hours after infarction or as scintigraphic activity is fading on day 6 after infarction or later)

Poorly Localized, Homogeneous Patterns 99mTc-PYP Uptake (usually 2+)

1. Increased activity visualized in only 1 or 2 projections: Unstable angina pectoris and, occasionally, acute subendocardial myocardial infarcts
2. Area of increased activity visualized in all projections: Acute subendocardial myocardial infarcts and, occasionally, unstable angina pectoris
3. Very large area of increased activity visualized in all projections and showing extensive overlap with sternum: Radioactive blood pool artifact

Summary

The data obtained in the present study suggest that serial imaging with ^{99m}Tc-PYP myocardial scintigrams is of valuable diagnostic assistance in the confirmation of acute subendocardial infarction in patients, and is also useful for the elimination of subendocardial myocardial infarction as a possible etiology for chest pain. The ^{9m}Tc-PYP scintigrams appear to provide information supplementary to cardiac serum enzyme activity and to the electrocardiogram, and thus, should be helpful in the clinical recognition of acute subendocardial infarction when there may be decreased reliance upon the ECG or enzymes for a variety of reasons. The ^{99m}Tc-PYP scintigrams frequently demonstrate a particular pattern of increased radionuclide uptake which is often in itself suggestive of acute subendocardial myocardial infarction. The incidence of false-negative ^{99m}Tc-PYP myocardial scintigrams appears to be

low. The data raise the unanswered question of whether the ^{99m}Tc-PYP scintigram may be more sensitive than enzymes and more specific than ECGs in recognizing acute subendocardial myocardial infarcts in patients, but only time and additional carefully controlled studies will provide the correct answer.

Acknowledgments

Mr Norman Vance, Mr Chuck Graham, Ms Linda Stevenson, Ms Judy Kredatus and Ms Anna Reynolds provided expert technical assistance, and Mrs Donna Place and Mrs Belinda Lambert provided secretarial assistance. We also appreciate the medical house officers, nuclear medicine residents, and nurses in the coronary care unit and radiology unit at Parkland Memorial Hospital in Dallas, without whose help these studies would not have been possible.

References

1. Kirk ES, Honig CR: Nonuniform distribution of blood flow and gradients of oxygen tension within the heart. Am J Physiol 207:661-668, 1964.

2. Griggs DM Jr, Tchokoev VV, Chen CC: Transmural differences in ventricular tissue substrate levels due to coronary constriction. Am J Physiol 222:705-709, 1972.

3. Lundsgaard-Hansen P, Meyer C, Riedwyl H: Transmural gradients of glycolytic enzyme activities in left ventricular myocardium. I. The normal state. Pflueger Arch Ges Physiol 297:89-106, 1967.

4. Moir TW: Subendocardial distribution of coronary blood flow and the effect of antianginal drugs. Circ Res 30:621-627, 1972.

5. Moir TW: Coronary vascular adjustment to acute myocardial ischemia. Arch Intern Med 129:799-807, 1972.

6. Guthrie RB, Vlodaver Z, Nicoloff DM, et al: Pathology of stable and unstable angina pectoris. Circulation 51:1059-1063, 1975.

7. Cook RW, Edwards JE, Pruitt RD: Electrocardiographic changes in acute subendocardial infarction. II. Small subendocardial infarcts. Circulation 18:613-622, 1958.

8. Johnson WJ, Achor RW, Burchell HB, et al: Unrecognized myocardial infarction. A clinicopathologic study. Arch Intern Med 103:253-261, 1959.

9. Friedberg CK: Symposium: Myocardial infarction 1972. 1. Introduction. Circulation 45:179-188, 1972.

10. Willerson JT, Parkey RW, Bonte FJ, et al: Acute subendocardial myocardial infarction in patients; its detection by technetium-99m stannous pyrophosphate myocardial scintigrams. Circulation 51:436-441, 1975.

11. Parkey RW, Bonte FJ, Meyer SL, et al: A new method for radionuclide imaging of acute myocardial infarction in humans. Circulation 50:540-546, 1974.

12. Willerson JT, Parkey RW, Bonte FJ, et al: Technetium stannous pyrophosphate myocardial scintigrams in patients with chest pain of varying etiology. Circulation 51:1046-1052, 1975.

13. Bonte FJ, Parkey RW, Graham KD, et al: A new method for radionuclide imaging of myocardial infarcts. Radiology 110:473-474, 1974.

14. Wagner GS, Row CR, Limbird LE, et al: The importance of identification of the myocardial specific isoenzyme of creatine phosphokinase (MB form) in the diagnosis of acute myocardial infarction. Circulation 47:263-269, 1973.

15. Buja LM, Parkey RW, Dees JH, et al: Morphologic correlates of technetium-99m stannous pyrophosphate imaging of acute myocardial infarcts in dogs. Circulation 52:596-607, 1975.

16. Friedberg CK, Horn H: Acute myocardial infarction not due to coronary artery occlusion. JAMA 112:1675-1679, 1939.

17. Miller RD, Burchell HB, Edwards JE: Myocardial infarction with and without acute coronary occlusion; pathologic study. Arch Intern Med 88:597-604, 1951.

18. Cook RW, Edwards JE, Pruitt RD: Electrocardiographic changes in acute subendocardial infarction. I. Large subendocardial and large nontransmural infarcts. Circulation 18:603-612, 1958.

19. Georas CS, Dahlquist E, Cutts FB: Subendocardial infarction. Correlation of clinical, electocardiographic, and pathologic data in 17 cases. Arch Intern Med 111:488-497, 1963.

20. Ehrlich JC, Shinohara Y: Low incidence of coronary thrombosis in myocardial infarction. A restudy by serial block technique. Arch Path 78:432-445, 1964.

21. Roberts WC, Buja LM: The frequency and significance of coronary arterial thrombi and other observations in fatal acute myocardial infarction: a study of 107 necropsy patients. Am J Med 52:425-443, 1972.

This study was supported by Ischemic Heart Disease Specialized Center of Research (SCOR) grant HL-17669, NIH grant HL-17777, the Southwestern Medical Foundation and the Harry S. Moss Heart Fund. Dr Willerson is an Established Investigator of the American Heart Association.

Dr Willerson and Dr Poliner, Department of Internal Medicine (Cardiac Unit); Drs Parkey, Stokely, and Bonte, Department of Radiology; Dr Buja, Department of Pathology; The University of Texas Southwestern Medical School, 5323 Harry Hines Boulevard, Dallas TX 75235.

From the Departments of Internal Medicine (Cardiac Unit), Radiology (Nuclear Medicine), and Pathology, The University of Texas Southwestern Medical School, Dallas.

Quality of care evaluation

Quality of care assessment is a complex endeavor which has not been fully addressed by the medical profession. Although the federal government, insurance companies, and consumer groups are demanding proof of quality from providers, the health care system has not yet clearly defined quality or developed reliable methods for its assessment. This article briefly reviews the evaluation of medical care, using as a framework Donabedian's classification system. The history, language, and problems of quality of care evaluation are briefly discussed.

There has been a long-standing effort in the United States to insure the quality of health care services. Over the years, professional initiative and governmental action have resulted in the regulation of quality assurance through a variety of measures. In its early stages, quality control was an informal, self-regulatory process; later, professional medical organizations developed formal standards. Governmental intervention was initiated when the states enacted health manpower licensing legislation. The passage of these laws was only the first step in what was to be government's increasing role in quality regulation.

Early governmental regulatory legislation focused on the establishment of minimum standards which were intended to protect the public from abuses and to prevent medical services and facilities from being utilized inappropriately. In recent years, however, government has expressed growing concern for the rationality of practitioner decision making due to an awareness of the impact which scientific and technological advances have made on the provision of medical care. Better use of scientific reasoning and decision making is viewed as a way to provide strong correlation between the processes used in providing health care and the eventual medical outcome.

Spiraling medical costs and financing by third parties, including the federal government and private insurance carriers, have increased concern for cost and quality control. The establishment of Professional Standard Review Organizations (PSROs)[1] is but one example of an attempt to deal with the burgeoning costs and the levels of quality and efficiency of two federal health care programs.

The consumer's growing interest in and influence over quality of care cannot be overlooked. The consumer movement has promoted the individual's right to question and monitor the provider in terms of excellence of the service rendered. Despite increased specialization and sophistication in the provision of health care, consumers have become well-informed and capable of appraising medical services. This newly developed insight and assertive behavior is due largely to public education and mass dissemination of information regarding the effectiveness of caregivers and treatments.

The development of methods for the assessment of quality of care has been catalyzed primarily by two factors: rapid advances in medical science and an expanded social consciousness. In the scientific realm, technological discoveries have enabled health professionals to strongly influence the quality of life. At the same time, availability of and access to health services have come to be regarded as basic human rights. The quality of medical care has become a focal issue for the public, the medical community, and the government. Attempts are under way to develop an equitable, reliable, and comprehensive system of quality assurance, although we do not yet possess the technological expertise necessary to formulate such a system.[2] In order to discuss the issues in the public arena and to influence the process of qual-

George L. Adams, MD
Joan R. Brochstein, MPH, MSW
Michael P. Tristan, MD, MPH
Charles C. Cheney, PhD
Janice Friese, BA

ity assurance, the medical profession needs to understand the language and problems of health care evaluation.

Definitions

A working definition of "quality" is a prerequisite in the assessment of medical care. One widely accepted definition describes quality in terms of eight "articles of faith" relating to process, goals, and objectives of health care.[3] In this definition, however, the criteria of quality merely appear to be value judgments as applied to the process of medical care. The fact that value judgments are implicit in definitions of quality is not uncommon. Although quality can be defined in a variety of ways, it usually mirrors the values of the medical community and social system of which it is a part.

It is important for the physician to distinguish between program evaluation and quality evaluation. According to Zusman,[4] "Program evaluation is the use of scientific techniques to measure the accomplishment of a service agency's activities or programs. Quality evaluation is the measurement of the extent to which a service or program is performed in accordance with generally accepted standards for services of that type. Quality control is the regular measurement of service quality combined with systematic action to raise the quality of unacceptably poor operations. Program evaluation, quality control, and several related processes are all branches of the general field of operations research."

Quality assessment in health service provision, then, is a process in which there are at least maintenance of provider technical competence, and mechanisms to correct inadequacies when discovered. This definition assumes the consideration of issues such as access to care, continuity of care, patient compliance and satisfaction, the organization of health services, and the outcome of care rendered.

Framework for Assessing Quality of Care

Donabedian[5-9] has developed an extensively used classification system in the evaluation of quality of care. He distinguishes three methods of assessment:

1. Assessment of structure: This technique addresses structural concerns such as physical facilities and medical manpower.
2. Assessment of process: This method involves an assessment of the interaction between provider and patient, with the needs of the patient being of primary concern.
3. Assessment of outcome: This mechanism studies the health status of the patient after treatment is completed; that is, it evaluates the results of the medical care provided.

Assessment of Structure

This approach to evaluation is concerned with the physical aspects of health care provision. Administrative practices and support services are also included. Quality is measured in terms of adequacy of facilities and equipment, the organization and qualifications of personnel, and the program and administrative operations. The assumption in this approach is that an adequate setting and qualified staff are the necessary precursors of good medical care. Structural assessment is utilized mainly by licensing and accreditation bodies. The process by which hospitals are accredited by the Joint Commission on Accreditation of Hospitals[10] is an example of structural assessment in the evaluation of quality.

The major liability in this method is that it is an indirect, limited measure of quality since it provides no information on the care

given to patients. Another objection to this method is the lack of linkage between structure, outcome, and process measurements.[5] Although this type of assessment provides few obstacles, there are no well established structural criteria by which to judge quality. On the other hand, there are many areas of disagreement, such as optimum ratio of patients to staff, the preferred distribution of health care providers, and so forth.

Assessment of Process

This technique examines the actual process of care-giving. The emphasis is on factors such as the data base obtained in the clinical history, the completeness and thoroughness of diagnostic procedures including the physical examination, the justification of diagnosis and treatment plan, technical competence exhibited by the practitioner in the performance of diagnostic and therapeutic procedures, the coordination and continuity of care provided the patient, and the patient's acceptance and compliance. In this approach, careful attention must be given to the relative dimensions, values, and standards to be used in evaluation. In assessing process, the measures of quality are less clear than in the assessment of outcomes. Nevertheless, these measures seem to address the central issue of quality evaluation; that is, how medicine is practiced.[11]

Several designs for process evaluation have been formulated. The record audit is the method most often used because it is inexpensive and provides minimal intrusion in the health care delivery process. However, records may not reflect the actual diagnostic and therapeutic process (or progress) and therefore may not be reliable. Brook[12] employed a variety of mechanisms in assessing quality of care and found that different methods of evaluation produced differing results. He concluded that individual case analysis is the most valid approach for both medical care process and patient outcome.

Assessment of Outcome

Outcome assessment judges the quality of medical care by measuring the extent of recovery or restoration of function in a patient. However, outcome studies are difficult to design and implement. Factors related to treatment, such as patient attitude and behavior, may influence outcome and cannot be easily evaluated. Random assignment of patients to control groups is often impossible because it may preclude some patients' receiving the treatment currently accepted for a particular illness. Still another consideration is that the outcome of treatment may vary according to the point in time at which it is measured.[13] And finally, the relevance of the outcome being measured is often open to question. Despite these difficulties, outcome as an indicator of quality is widely accepted because measurements are direct and concrete.

Unfortunately, consumer satisfaction as an outcome measurement has been neglected. This is partially because of the poor correlation between patient satisfaction and the quality of the work performance of the providers. A patient may be positively impressed by a provider whose work is of poor quality but who has an appealing personality, whereas another patient may be dissatisfied with the work of a highly competent practitioner who has not met the patient's emotional needs. Although difficult to assess, client satisfaction is an important factor in health outcomes.

Problems of the Classification Framework

There are numerous problems inherent in the use of the classification system described. An adequate evaluation depends on the consideration of factors beyond the scope of the framework, such as the sources and means of obtaining information. Clinical records present many areas

of concern. Their availability, completeness, and reliability are vitally important to the evaluation process. Questions of appropriate methodology, measurement standards, and validity and reliability of assessment also create many problems in the design of health care evaluation. For example, choices must be made as to whether a complete record or an abstract of the record should be used, or whether normal or optimal standards are to be used, or which measurements should be made and what instruments should be used in gathering data. It is factors such as these which make the evaluation of quality difficult. In spite of all these constraints, Donabedian's classification system appears to provide the most useful framework in quality of care evaluation.

A crucial factor not addressed in Donabedian's classification system is the relationship between structure, process, and outcome. Williamson[14] has attempted to deal with this problem by proposing a system for relating process and outcome. According to his strategy, outcome measurements would be obtained as a first step in any evaluation. If the outcome corresponds to established outcome criteria, assessment of process is not necessary. If, on the other hand, the outcome assessment is below standard, a process assessment is required. Recognizing that the development of outcome criteria is difficult, Williamson[15] also discusses the feasibility of identifying health priorities and developing outcome criteria to be determined by experts.

In the area of mental health care, for example, efforts in the assessment of quality have been slowed because of the difficulty of developing appropriate techniques. Recently, however, there have been attempts to adopt established evaluative procedures, such as the Kessner Tracer Technique,[16,17] to psychiatry, and there have been many studies to determine the validity and reliability of psychological and social adjustment instruments for use in the assessment of outcome.

Conclusion

Quality of care evaluation is a complex undertaking characterized by numerous methodological problems. There is no generally accepted definition of what constitutes "quality" and no approach which adequately addresses the many variables involved in the assessment of quality. Although the current classification systems and evaluative techniques provide a framework for assessment, further effort is needed in order to establish reliable methods for judging and assuring quality of health care.

References

1. Section 249-F, Public Law 92-603, HR-1, 92nd Congress, Oct 30, 1972.

2. Institute of Medicine: Advancing the quality of health care. Institute of Medicine Publication 74-04. National Academy of Sciences, Washington, DC, 1974.

3. Lee RI, Jones LW: The fundamentals of good medical care. University of Chicago Press, 1973.

4. Zusman J: Program evaluation and quality control in mental health services in: Bellak L, Barten HH, Eds: Progress in community mental health, Vol 3. New York, Brunner/Mazel Publishers, pp 233-264, 1975.

5. Donabedian A: Evaluating the quality of medical care. Milbank Mem Fund Quart 44Supl:166-206, 1966.

6. Donabedian A: A medical care appraisal-quality and utilization, in: A guide to medical care administration, Vol 2. New York, The American Public Health Association, Inc, 1969.

7. Donabedian A: Evaluating the quality of medical care, in: Schulberg HC, Sheldon A, Baker F, Eds: Program evaluation in health fields. New York, Behavorial Publications, pp 186-218, 1969.

8. Donabedian A: Promoting quality through evaluating the process of health care. Med Care 6:181-202, 1968.

9. Donabedian A: Aspects of medical care administration: specifying requirements for health care. Cambridge, Harvard University Press, 1973.

10. Joint Commission on Accreditation of Hospitals: Accreditation manual for psychiatric facilities. Chicago, Joint Commission on Accreditation of Hospitals, 1972.

11. Liptzin B: Quality assurance and psychiatric practice: a review. Am J Psychiatry 131:1374-1377, 1974.

12. Brook RH: Quality of care assessments: a comparison of five methods of peer review. Publication No. HRA-74-3100. Rockville, MD, US Dept of Health, Education, and Welfare, 1973.

13. Kubie LS: The process of evaluation of therapy in psychiatry. Critical influence of the timing of the assessment on its outcome. Arch Gen Psychiatry 28:880-884, 1973.

14. Williamson JW: Evaluating quality of patient care. A strategy relating outcome and process assessment. JAMA 218:564-569, 1971.

15. Williamson JW, Alexander M, Miller GE: Priorities in patient-care research and continuing medical education. JAMA 204:303-308, 1968.

16. Kessner DM, Kalk CE, Singer J: Assessing health quality—the case for tracers. N Eng J Med 288:189-194, 1973.

17. Klerman GL: New research approaches to quality of care evaluation. Presented at APA annual meeting, May 1976, Miami Beach, Fl.

George L. Adams, MD; Joan R. Brochstein, MPH, MSW; Michael P. Tristan, MD, MPH; Charles C. Cheney, PhD; and Janice Friese, BA, Department of Psychiatry, Baylor College of Medicine, Houston, TX 77030.

Information for authors

Texas Medicine is a scientific, clinical journal published primarily for members of the Texas Medical Association. In addition, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, coming meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Scientific Articles
Manuscripts should be typed double-spaced with ample margins on firm paper. Two copies should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

References
Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrative Material
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously Published Material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with the manuscript.

Editorials
Editorials should be prepared in the same general manner, and should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the Managing Editor and consultants.

News
News items should be sent to the Editorial Offices, 1801 North Lamar Blvd., Austin 78701.

Continuing Education, Meetings
Continuing education courses and medical meetings are listed in each issue. Information about courses should include title, sponsor, location, dates, duration, fee, how many may enroll, for whom the course is designed, teaching methods, type and number of hours credit, and name and mailing address of a person to contact.

Information about meetings should include the name of the organization, place and inclusive dates, and name and mailing address of a person to contact. Program topics and names of speakers may be included as space permits.

Material should be submitted in writing six weeks before publication; for example, information for the June issue (published June 1) is needed by April 15.

Obituaries
Obituaries of deceased TMA members are published if adequate information is received within four months of date of death. When notifying the editors of a member's death, please give the name and address of next of kin.

Policy on Columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

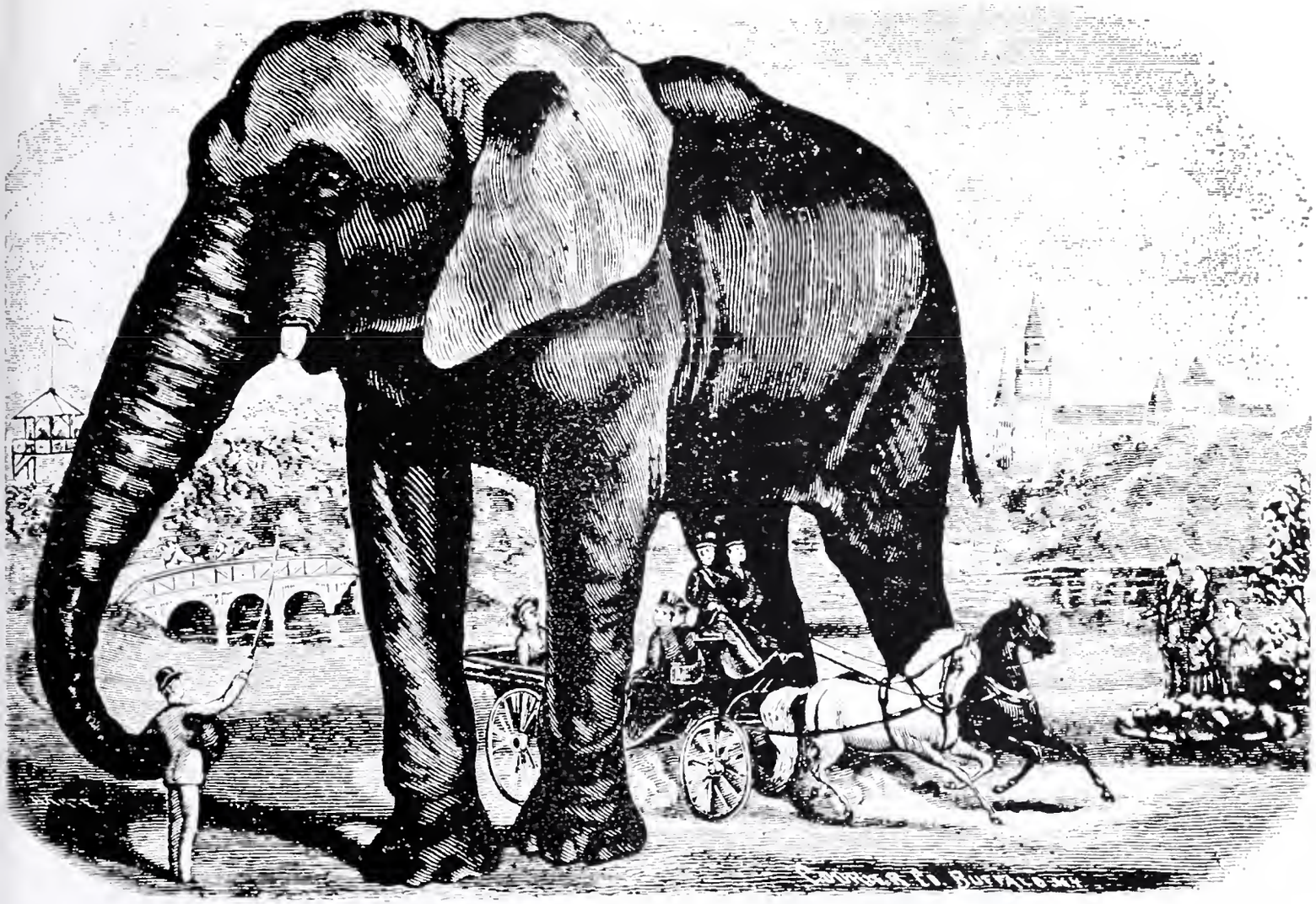
The Scientific Publication Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the Committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the Managing Editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.



See The Motorcycle ?

You may not find a motorcycle in this picture, but you'll find plenty of them on Texas' streets and highways.

The trouble is, not enough automobile drivers are seeing motorcycles when they should. Not until it's too late, anyway.

Maybe if motorcycles were as big as elephants, you'd be more careful when you see them. But nothing is bigger than human life. And that's what we're really asking you to look out for.

CycleSafe

The Governor's Office of Traffic Safety

DISASTER

Charles R. Queen, MD

Any community that is served by a commercial air carrier entertains the risk of having 67 severely injured patients suddenly thrust into their local medical facilities. It is not necessary to have a spectacular 747 accident as happened in the Canary Islands March 27, 1977. The same number of casualties can result from a DC-9 undershooting a local runway on a foggy night. Medically we are not concerned with the magnitude of the catastrophe, the size of the vehicles involved, or the number of dead; just the survivors.

A long series of coincidences culminated in holocaust that vaporized two 747s and left severely injured patients in the Canary Islands March 27, 1977.

By some miracle, 67 people survived out of a total of 643. Each of the 67 related unique tales of their sudden hell; initially, however, they could only succumb to the realization of survival.

Considering the interest the author had developed in Texas Disaster Medical Care, it was with some degree of satisfaction that I found a well organized medical response in a remote part of the world of which I had never previously heard (Tenerife).

The response

Immediately following the accident, the local medical community, as a result of

forethought to such an event, rose to the occasion. Three local Spanish hospitals mobilized their resources, their staffs, and their supporting ambulance services.

A pre-existing dynamic disaster plan was immediately implemented and the chiefs of the various teams sorted and admitted survivors within a relatively short period.

Apparently, there were a surprising number of ambulances available on the small island. Of the 50 available on the island, 25 to 28 were active during the accident. Many casualties were transported by private vehicles, a common occurrence in disasters.

Hospital care

Three hospitals accepted the casualties: the Hospital General y Clinico de Tenerife (a provincial hospital with 500 beds and a medical and nursing school); the Residencia Sanitaria de la Candelaria (state hospital of 600 beds); and the military hospital (size unknown).

Charles S. Queen, MD, is a Lieutenant Colonel in the United States Air Force. A former Edinburg physician, Dr Queen served as chairman of the TMA Committee on Disaster Medical Care and was recognized for his medical care during the aftermath of Hurricane Beulah in 1967.

The Canary Islands, being a vacation oasis, have a particularly large number of commercial aircraft in and out of their airports daily. This fact probably prompted the local medical community in its consideration of a realistic disaster plan. Trauma teams versed in orthopedic, burn, and surgical trauma had been planned, considering the fact that modern aircraft accidents produce such, especially burns. Immediate care provided for the burns was patterned after the Brooks Burn Center methodology. Other trauma care was standard and of excellent quality.

Medical care evacuation team.

The United States Air Force was tasked with the transport of the survivors from Tenerife to the States, an operation for which all of the medical air evacuation systems constantly train. Equipment, personnel, and methodology are available to every point on the globe. Interface with the United States Army air ambulance service via helicopter adds the capability of rapidly bringing patients out of otherwise inaccessible places. Such services are available to local remote communities as well as exotic locales such as the Canary Islands.

The actual Tenerife operation was scrambled within two hours of the alert on the evening of the accident. Aircraft capable of short field operation and others with long

range capabilities were diverted from England, Germany, and from over the Atlantic. Medical crews from the air evacuation center in Germany as well as augmented air crews from both sides of the Atlantic converged on the accident scene.

Forty-eight hours elapsed before actual evacuation took place. The time was taken by diplomatic clearance procedures which at the time seemed excessive. In retrospect,

Workers assist one of the crash victims onto the aircraft.

Workers prepare the aircraft to receive stretchers

however, the interval allowed the local medical personnel time to stabilize the patients, a most desirable move.

The survivors

The C-10 "Hercules" aircraft was selected for the initial landing at Tenerife airport since the runways were obstructed by the debris of the accident and landing on the taxiway was necessary. Of the 67 survivors, 54 were loaded on the aircraft including 15 walking cases and 39 litter patients. Of the litter cases, 12 suffered severe burns. Ten of these patients had 30 to 50% second degree burns, of which 6 had 10 to 62% third degree burns. Two patients had 15 to 20% burns. Five of the patients, some with burns, had fractures which would require fixation by surgical intervention. It was not until the loading was over half accomplished that it was known exactly how many

patients would be evacuated.

The medical crew, air crew, support persons, and others amounted to an additional 25 people.

A short flight to Las Palmas Airport, one of the major islands, took place where a C-141 Starlifter was waiting, having been configured within the hour to accept the patients. Transloading was completed during the dusk hours, hampered by a 35 knot wind with blowing dust.

The trip to New Jersey was marred by one death secondary to pulmonary burn embarrassment. In New Jersey, the crews were changed, refueling was accomplished, and certain fracture cases as well as those desiring local hospitalization were deplaned. Within 90 minutes the burn cases continued on to the burn center in San Antonio.

A poignant representative tale could be related regarding a man who was rather severely burned and who had come to us with eyes wrapped because of corneal burns. An hour out of New Jersey we removed his eye dressings. After he found his vision to have returned to normal, we asked him what he had been thinking of during the 48 hours. He answered, "Is my life to be in darkness from here on?"

Victims of the crash are in the aircraft on stretchers.

Texas airports

A few years ago, the author quizzed ten representative Texas airports regarding their disaster plans. The results were some-

what discouraging. As a rule, large airports had rather elaborate accident plans and facilities, some of which were of doubtful value. Smaller community airports frequently had dusty plans which were rarely drilled. Questions such as who, where, how, and when were rarely answered; the not so simple problems of transport, sorting, immediate treatment, and on-the-scene direction were frequently not really answered.

Conclusion

The uniqueness of the Canary Islands disaster is the fact that two giant transport aircraft, filled with the latest of this century's mechanical marvels, somehow collided on a remote runway.

The peculiarity of the crash was that anyone survived.

The lesson to be learned is that the smallest scheduled air carrier in service to the most remote municipal airport in the state can generate, in a few minutes, twice as many equally critical patients.

The casualties then become a nightmare of disaster medical care for your hospital. Your only hope for maintaining a semblance of order and professionalism is to have a workable, rehearsed disaster plan. It is much later that others can come to your aid.

"The lesson to be learned is that the smallest scheduled air carrier in service to the most remote municipal airport in the state can generate, in a few minutes, twice as many equally critical patients."

Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

■ **Most Widely Prescribed**—Antivert is the most widely prescribed agent for the management of vertigo* associated with diseases affecting the vestibular system such as Menière's disease, labyrinthitis, and vestibular neuronitis.

■ **Relief of Nausea and Vomiting**—Antivert/25 can relieve the nausea and vomiting often associated with vertigo.*

■ **Dosage for Vertigo***—The usual adult dosage for Antivert/25 is one tablet t.i.d.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25 (meclizine HCl) 25 mg. Tablets for vertigo*

Only 1 tablet B.I.D.

New convenienc

Gantanol® DS

sulfamethoxazole/Roche

double-strength dosage form for acute cystitis* patients

*nonobstructed, due to susceptible organisms

ew Gantanol® DS (sulfamethoxazole) tabts offer even greater convenience and conomy for your patients with acute, nobstructed cystitis due to susceptible rains of *E. coli, Klebsiella-Aerobacter,* aphylococcus, *Proteus mirabilis* and, ss frequently, *Proteus vulgaris*...
ne same amount of medication, the same ficacy, with only *half* the number of tablets er day.
mplified dosage regimen encourages pant compliance: 2 tablets (1 Gm each) TAT—then 1 tablet B.I.D. for 10 to 14 days.
linical efficacy so basic you can start cysis therapy even before culture results are vailable.

- In a clinical study of 406 patients on Gantanol (sulfamethoxazole) B.I.D., close to 9 out of 10 patients achieved negative urine cultures. While Gantanol tablets were used in this study, one Gantanol DS tablet has been proved bioequivalent to two Gantanol tablets.*

Gantanol is contraindicated during pregnancy, during the nursing period, and in infants under 2 months. During therapy, maintain adequate fluid intake, perform frequent CBC's and urinalyses with careful microscopic examination.

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.

and economy

efore prescribing, please consult complete product formation, a summary of which follows:

dications: Acute, recurrent or chronic urinary tract infecns (primarily pyelonephritis, pyelitis and cystitis) due to sceptible organisms (usually *E. coli, Klebsiella-Aerobacter,* aphylococcus, *Proteus mirabilis* and, less frequently, *oteus vulgaris*), in the absence of obstructive uropathy or reign bodies. Note: Carefully coordinate *in vitro* sulnamide sensitivity tests with bacteriologic and clinical sponse; add aminobenzoic acid to follow-up culture edia. The increasing frequency of resistant organisms nits the usefulness of antibacterials including sulnamides, especially in chronic or recurrent urinary tract fections. Measure sulfonamide blood levels as variations ay occur; 20 mg/100 ml should be maximum total level.

ontraindications: Sulfonamide hypersensitivity; pregncy at term and during nursing period; infants less than o months of age.

/arnings: Safety during pregnancy has not been estabshed. Sulfonamides should not be used for group A eta-hemolytic streptococcal infections and will not eradiate or prevent sequelae (rheumatic fever, glomerulonenritis) of such infections. Deaths from hypersensitivity reacons, agranulocytosis, aplastic anemia and other blood yscrasias have been reported and early clinical signs ore throat, fever, pallor, purpura or jaundice) may indiate serious blood disorders. Frequent CBC and urinalysis ith microscopic examination are recommended during lfonamide therapy. Insufficient data on children under x with chronic renal disease.

recautions: Use cautiously in patients with impaired renal r hepatic function, severe allergy, bronchial asthma; in gluose-6-phosphate dehydrogenase-deficient individuals in hom dose-related hemolysis may occur. Maintain adeuate fluid intake to prevent crystalluria and stone formation.

dverse Reactions: *Blood dyscrasias* (agranulocytosis, plastic anemia, thrombocytopenia, leukopenia, hemolytic nemia, purpura, hypoprothrombinemia and methemolobinemia); *allergic reactions* (erythema multiforme, skin ruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis). *Usual adult dosage:* 2 Gm (2 DS tabs or 4 tabs or 4 teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially; then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: DS (double strength) tablets, 1 Gm sulfamethoxazole; Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

Basic therapy with convenience and economy:
Gantanol® (sulfamethoxazole)Roche®

Basic therapy with even more convenience and economy:
Gantanol® DS (sulfamethoxazole)Roche®

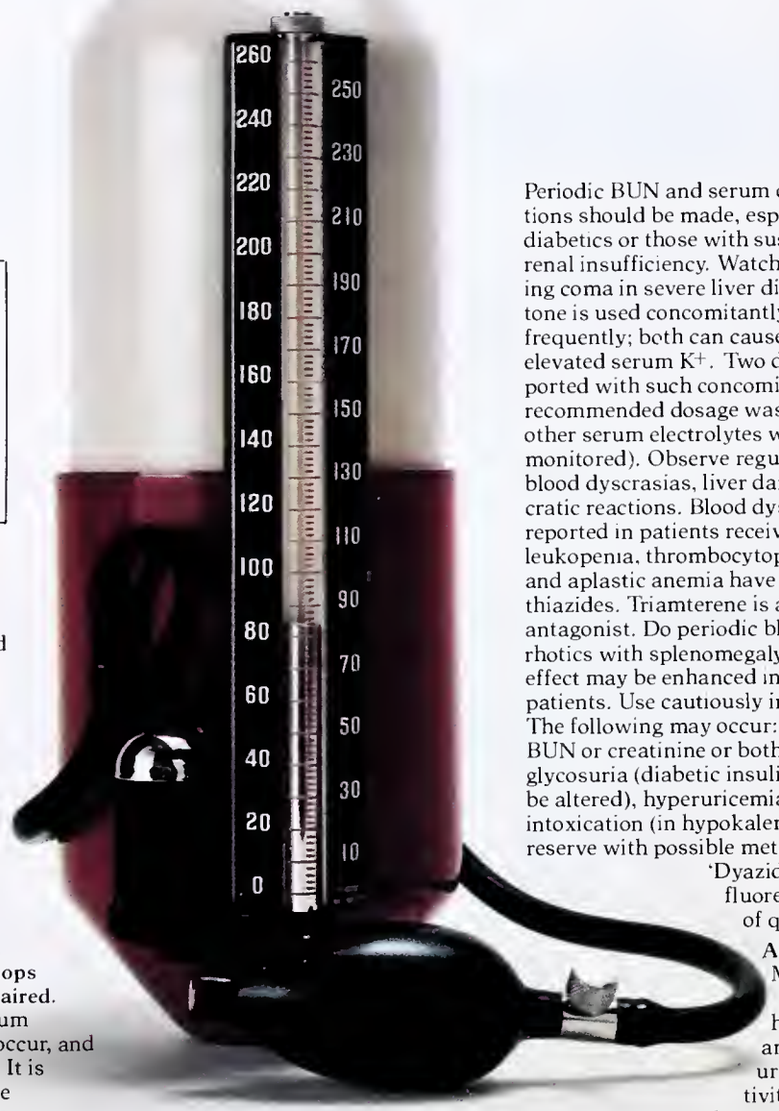
ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE



Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* **Warning**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

FOR LONG-TERM CONTROL OF HYPERTENSION.* SERUM K^+ AND BUN SHOULD BE CHECKED PERIODICALLY. (SEE WARNINGS SECTION.)

SK&F CO., Carolina, P.R. 00630

SK&F CO.
a SmithKline company

N'da Ha Laago

Fred C. Rehfeldt, MD

Navajo medicine men weathered the advent of scientific medicine to remain a coveted part of Navajo life, but how will the estimable shaman fare when facing inevitable bureaucratic incursions?

On March 28, 1977, the *U.S. News & World Report* stated that "Navajo Indians working as coal miners in northern Arizona want the United Mine Worker's health and retirement funds to pay for services rendered by tribal medicine men."

This service cannot be offered without the intrusion of federally imposed methods of accountability to which the shaman is not accustomed. To explore this inescapable collision of the aboriginal mind with the bureaucratic stance let us offer a brief explanation of Navajo healing rites and then fantasize a medicine man's first attempt to file a claim for third party payment.

Ordinary people and supernatural beings

Navajos regard the universe as an all inclusive unitary system of interrelated elements consisting of ordinary people who live on earth and supernatural beings who live in the sky. The supernatural or holy people are thought to possess great powers, but because they are not all powerful, all knowing or wholly good they can be manipulated by earth people.

Tribal canon stipulates the interrelationship of the earth people and the sky people. Those who abide by these ineluctable laws remain safe (holy) while transgressors may be restored to safety (holiness) by reaffirmation through the intercession of Navajo

Fred C. Rehfeldt, MD, is a Texas physician living in Millsap.

Courtesy Amon Carter Museum, Fort Worth

priest-physicians. However, supplication in the case of illness is only part of their ministry since the supernatural are involved in all aspects of Indian life.

For treating illness the shaman uses the suggestionism of healing ceremonies and the pragmatism of an astonishing formulary of herbs, enemata, cauterization, bone splinting, inhalations, poultices and sweat-baths.

For the Navajo, illness is either natural, or inevitable.

The illness is natural if the patient is in disharmony with the supernatural ones of the spirit world as a result of conscious or unconscious taboo transgressions. The illness is inevitable if it is other than a spiritual transgression as trauma, senility, or neonatal complications.

The etiology of a natural disease may be breach of taboo (BAHAZID), possession of evil spirits, loss of soul, witchery, or intrusion of a foreign object.

Medicine men may treat inevitable conditions without ceremony, as the setting and splinting of fractures, but, because of the demonic concept of etiology, treatment of natural disease must perforce be holistic not symptomatic. The sing to remove an intruded foreign object is ostensibly symptomatic but actually is a superb dramatization of symbolism.

The shaman

A shaman initiates a sing by placing himself in a trance during which he releases his soul to roam the spirit world seeking information about his patient's disharmonies and suggestions as to an appropriate ceremony.

If his quest fails he might make random test sings or use a ceremony with universal application, a broad-spectrum ritual.

Affluent Indians are apt to be offered the most elaborate ceremonies.

The Navajo shaman is a thoughtful and responsible empiricist who has learned his craft from predecessors who had him memorize dozens of chants, dances and sandpaintings which he must perform flawlessly. The chants have such profound impact that a single error might imprecate the patient. Like inveterate opera buffs the Indians recognize error and excellence as well, but unlike opera a healing chant is not regarded as entertainment.

The chants are poignant and eloquent recitations of a people ravaged by animalistic fear, singing of their romanticized symbiosis with nature and the sanctity of their relationship with their fellow tribesmen and with the numinous beings who haunt them.

While the patient is the central figure in the healing rite the welfare of the tribe is the utmost consideration.

The ceremony

A gourd rattle, medicine pouch, and a bull roarer are essential paraphernalia. The bull roarer is a flat stick carved from a lightning struck tree and tied to a long string. When whirled overhead a roar is made simulating thunder which the Navajos regard as the voice of the supernatural.

The ceremony may be brief or extend for as long as nine days. The principal activities take place in the patient's hogan at night about a fire.

The darting, firecast shadows of the shuffling dancers, eerie moaning of the bull roarer, strident ululating of the singers, and the pulsing drums add to the mystique.

The most spectacular of the shaman consultants is the "trembler". His liturgy consists of incantations, unctions and solemn movements of his hand over the supine patient. A sudden violent trembling of the divining hand designates the site of the presumed lesion.

Since the ritual sing is a purification rite vomiting and purgation are induced with herbal preparations; sweat baths are common and sexual abstinence is required.

A prestigious shaman might be followed by a corps of trainees who participate in the ceremonies to learn the chants, dances and the skill of sandpainting, though these onerous apprenticeships—about 25 years—attract fewer and fewer young Navajos.

The shaman and his aides make the painting during the afternoon prior to the evening ceremonies by first laying down a base of neutral colored sand upon which

are superimposed patterns made of charcoal, crushed rock of various hues, pollen and flowers which are sifted through the thumb and bent forefinger of the worker. Long straight lines are guided by stretched string.

The centuries old patterns are enormously complex and must be executed without flaw or improvisation since each figure is starkly significant.

Dozens of these time honored patterns have been reproduced on plaques as art objects and the Navajos freely exhibit the making of sandpaintings at exhibitions. Non-Navajos rarely see them used in ceremony since they are made on the floor of the patient's hogan too small to admit a crowd. Because of ritual, implications are always destroyed at sunup.

The preliterate Navajo did not regard them as esthetic expression.

The painting serves as a treatment table. The patient is placed upon it so that his body touches certain prescribed designs while subject to further expurgation. By sunup, disheveled by the restorative activity, the sand is thrown toward the East sun.

When intrusion of a foreign body is thought to be the cause of disharmony, its pantomimed extraction consummates the ceremony. The shaman, by sleight of hand, first places the plausible object in his mouth, then as he touches his lips to the affected area causes the offending object to appear on his lips. High drama is added if he bites his own tongue to produce some accompanying blood.

If a patient does not do well the illness is beyond the capacity of the shaman, due to shaman error, or the patient waited too long for help.

The shaman error may be incorrect recall of the chant, improvisations in the sandpainting, or misdirection of the choreography.

The fee, N'da Ha Laago, is determined by the complexity of the ceremony and the assets of the patient. Payment may be in sheep, blankets, cash, or other valuables. Sheep, a discernible measure of Navajo wealth, are preferred.

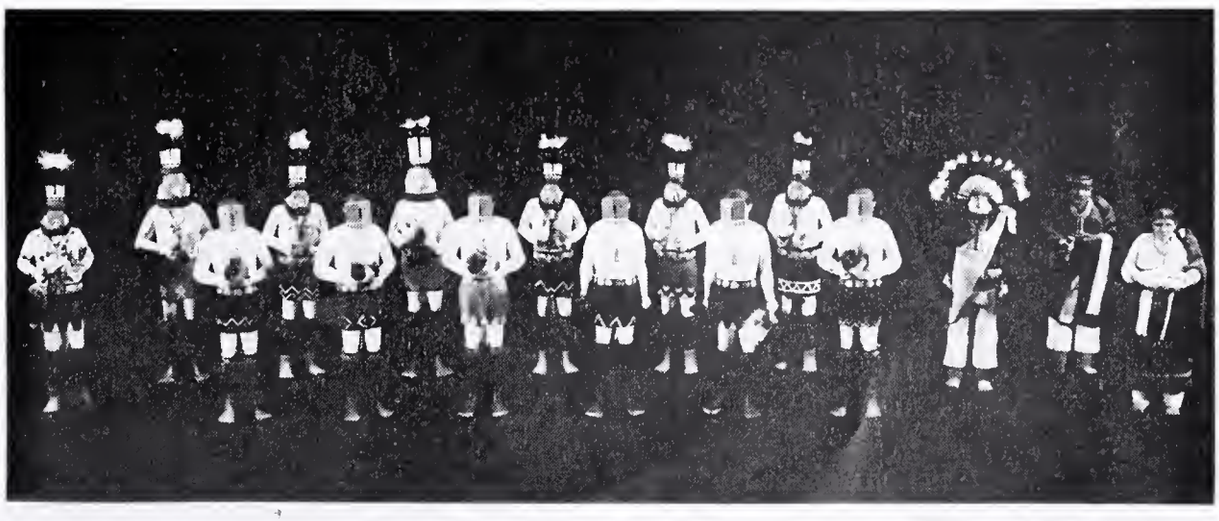
Hosteen Yazzi

Hosteen Yazzi is an august Navajo shaman who realizes that the miracles of secularized medicine which forebode the demise of his craft is part of the insidious acculturation threatening all Navajo tradition.

Nevertheless he is busy with those who seek his services. He is frequently called to lend spiritual support to hospitalized patients and many after hospital treatment come to him for healing rites feeling that their spiritual needs were not met by the white physicians though symptomatically they benefitted.

The reaction of one Navajo to a period of hospitalization is quoted by Kluckhon and Leighton:

> "You go to a hospital and maybe once a day a doctor comes around and he stays three, maybe five, minutes. He talks a little bit but he



Courtesy Amon Carter Museum, Fort Worth

asks you questions. Once in a while they give you a little medicine, just a little of it. About the only thing they do is put something in your mouth and see how hot you are. The rest of the time you just lie there. But the medicine men help you all the time—they give you *lots* of medicine and they sing all night. They do lots of things all over your body. Every bit of your body is treated."

The last time I saw Yazzi he was visibly depressed. After exchanging strained amenities he explained his dilemma.

"I learned that Blue Cross-Blue Shield was the fiscal intermediary for the United Mine Worker's health fund, so I sent a request for payment to them for a nine day Yeibichai sing with five sandpaintings which I did for Ashon Greyhair.

"Now it is I who am in disharmony because I did not know the rules," Yazzi said.

He then handed me a sheaf of papers and asked me to advise him.

The medical record

On top of the stack was a medical record, the first Yazzi had ever attempted. His daughter, a registered nurse, helped him.

Ashon Greyhair, age sixty-eight, a widow, complained of malaise, nausea, upper abdominal pain, and diarrhea for four or five days before examination. A four and one-half hour trance revealed that she was in transgression and invaded by a foreign object as punishment.

The Yeibichai sing with five sandpaintings was recommended by the supernatural advisor and the family agreed, though they realized it would be expensive and due to its length and intricacy was prone to shaman error.

An error was made in the fourteenth hour of the chant. This was rectified by substituting four hours of the Blessing Way sing.

A consultant "trembler" located the foreign object in the upper right abdominal quadrant and it was removed in the usual manner.

Vomiting and purgation were achieved; enemata and inhalations were administered. She died two days after the completion of the sing.

The next paper was a statement of Yazzi's professional fee:

One Yeibichai sing	20 sheep
Consultant	1 sheep
Materials for five sandpaintings	2 sheep
Total	23 sheep

Yazzi also had a letter from the northern Arizona office of PSRO. The letter stated, "The diagnosis 'Intrusion of a Foreign Object' is not acceptable nomenclature. If this disease is common in your area your medical society or hospital staff should prepare criteria and forward to this office for review.

"Before treating another patient with this condition it will be necessary for you to submit a preadmission diagnosis and treatment plan.

"Our advisory committee composed of a chaplain, a chiropractor, a hospital administrator, a Red Top representative, and five consumers whose incomes are less than $10,000 a year have advised us that a five day sing would have been adequate, that the corrective Blessing Way chant was not necessary and that one sandpainting would have been sufficient.

"There is no signed operative note and no signed consultation from Dr Trembler.

"Payment cannot be made to you for services performed by a trainee. You are aware that twenty-five percent of your trainees must plan to enter family practice and they must be admitted to your program in a proper ethnic mix."

Yazzi also had a letter from an attorney he had retained to defend him in a malpractice action. The lawyer wrote:

"At a conference with the attorneys for the family of Ashon Greyhair I found them to be confident.

"They noted that there was no record of an informed consent.

"Another shaman is prepared to testify that a Yazzi trainee chose an incorrect color for one of the sandpainting radials. He feels that this was a negligent act with serious consequences.

"Also, they have retained a professor from a large eastern medical school, an unimpeachable authority on ceremonial healing rites, who is prepared to testify that the

If you're sick of visiting auto showrooms and high-pressure salesmen, try our remedy.

You can see every kind of car made — American or foreign — in one place. Yours. Just let us know the cars you're interested in. We'll bring you full color brochures with all the information. Then we'll make all the leasing arrangements. It's easy — and your new car will be just what the doctor ordered.

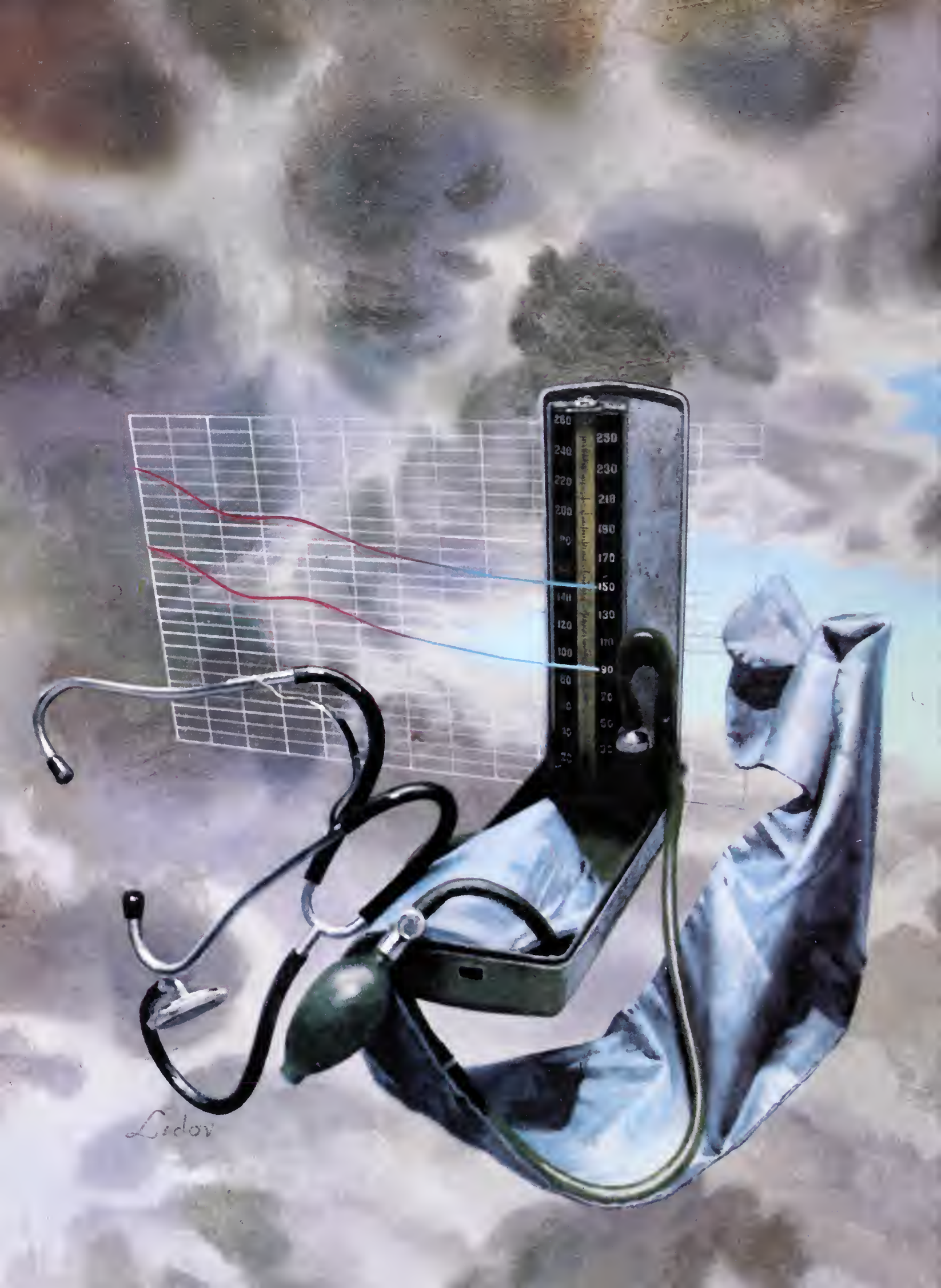
There are more advantages too:

- Tax write-offs
- Low lease costs
- Positive cash flow
- No record-keeping necessary
- Custom-tailored leases
- Total maintenance of Lincoln-Mercury products.

Texas Medical Association Automobile Lease Program

Underwritten by:

Bankston Rentals, Inc. • 4747 LBJ Freeway • Dallas, Texas 75234 • 214/233-1441
Southwest Motor Leasing, Inc. • 6737 Southwest Freeway • Houston, Texas 77074 • 713/777-3816


260
240
220
200
230
230
218
190
170
150
130
110
90
70
50
Lidov

When choosing a diuretic for day-in-day-out hypertension control with comfortable compliance...

The agent you choose in mild to moderate essential hypertension should offer (1) long-term effectiveness, (2) patient comfort and compliance.

Zaroxolyn offers both.

In one long-term study[1] Zaroxolyn brought moderately elevated (average 161/109 mm Hg) blood pressure down to the range of normotension—and held it there for a year or more.

The investigator noted, "Patient cooperation was surprisingly good for a study of such duration [2½ years]. The once-daily dosage schedule with metolazone [Zaroxolyn] no doubt contributed to patient compliance."

Overall compliance with Zaroxolyn is good—very good. An analysis of controlled clinical studies involving 188 Zaroxolyn patients showed that only eight discontinued therapy because of side effects. That's a discontinuation rate of only 4.3%, and broader clinical experience appears to substantiate this low rate[2]

Zaroxolyn. For long-term control and comfortable compliance in mild to moderate hypertension.

Recommended initial dosage in mild to moderate essential hypertension–2½ to 5 mg once daily

Zaroxolyn®

(metolazone, Pennwalt)

2½-mg, 5-mg and 10-mg tablets

once-daily antihypertensive diuretic

Before prescribing, see complete prescribing information in the package insert, or in PDR, or available from your Pennwalt representative. The following is a brief summary. **Indications:** Zaroxolyn (metolazone) is an antihypertensive diuretic indicated for the management of mild to moderate essential hypertension as sole therapeutic agent and in the more severe forms of hypertension in conjunction with other antihypertensive agents. Also, edema associated with heart failure and renal disease. **Contraindications:** Anuria, hepatic coma or precoma; allergy or sensitivity to Zaroxolyn. Or, as a routine in otherwise healthy pregnant women. **Warnings:** In theory cross-allergy may occur in patients allergic to sulfonamide-derived drugs, thiazides or quinethazone. Hypokalemia may occur, and is a particular hazard in digitalized patients; dangerous or fatal arrhythmias may occur. Azotemia and hyperuricemia may be noted or precipitated. Considerable potentiation may occur when given concurrently with furosemide. When used concurrently with other antihypertensives, the dosage of the other agents should be reduced. Use with potassium-sparing diuretics may cause potassium retention and hyperkalemia. Administration to women of childbearing age requires that potential benefits be weighed against possible hazards to the fetus. Zaroxolyn appears in the breast milk. Not for pediatric use. **Precautions:** Perform periodic examination of serum electrolytes, BUN, uric acid, and glucose. Observe patients for signs of fluid or electrolyte imbalance. These determinations are particularly important when there is excessive vomiting or diarrhea, or when parenteral fluids are administered. Patients treated with diuretics or corticosteroids are susceptible to potassium depletion. Caution should be observed when administering to patients with gout or hyperuricemia or those with severely impaired renal function. Hyperglycemia and glycosuria may occur in latent diabetes. Chloride deficit and hypochloremic alkalosis may occur. Orthostatic hypotension may occur. Dilutional hyponatremia may occur in edematous patients in hot weather. **Adverse Reactions:** Constipation, nausea, vomiting, anorexia, diarrhea, bloating, epigastric distress, intrahepatic cholestatic jaundice, hepatitis, syncope, dizziness, drowsiness, vertigo, headache, orthostatic hypotension, excessive volume depletion, hemoconcentration, venous thrombosis, palpitation, chest pain, leukopenia, urticaria, other skin rashes, dryness of mouth, hypokalemia, hyponatremia, hypochloremia, hypochloremic alkalosis, hyperuricemia, hyperglycemia, glycosuria, raised BUN or creatinine, fatigue, muscle cramps or spasm, weakness, restlessness, chills, and acute gouty attacks. **Usual Initial Once-Daily Dosages:** mild to moderate essential hypertension—2½ to 5 mg; edema of cardiac failure—5 to 10 mg; edema of renal disease—5 to 20 mg. Dosage adjustment may be necessary during the course of therapy. **How Supplied:** Tablets, 2½, 5 and 10 mg.

References:

1 Dornfeld L, Kane R. Metolazone in essential hypertension. The long-term clinical efficacy of a new diuretic. *Curr Ther Res* **18**: 527-533, 1975

2 Data on file, Medical Department, Pennwalt Prescription Products

PENNWALT

Pennwalt Prescription Products
Pharmaceutical Division
Pennwalt Corporation
Rochester New York 14603

A character all its own.

Valium (diazepam) is a benzodiazepine with a character all its own. Pharmacologically, it has been described as more potent mg-per-mg than other available anxiolytic benzodiazepines. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported, should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

omissions in the fourteenth hour were negligent acts and may have resulted in Greyhair's death.

"They might be bluffing, but if they offer to settle for one hundred sheep I urge you to agree."

After I had finished reading, Yazzi ruefully asked:

"Do you think I could get in harmony with those supernatural people in Washington if I made a sandpainting with peanut butter?"

Selected Bibliography

Alexander CI: *An Introduction to Navajo Sandpainting*. Museum of Navajo Ceremonial Art, 1967.

Kluckhorn, C Leighton D: *The Navajo*, Harvard University Press, 1960.

Levy JG: *Indian Healing Art* (pamphlet), Fort Worth, Amon Carter Museum.

Newcomb FJ: *Hosteen Klah*, University of Oklahoma Press, 1964.

Schultz JW: *A Son of the Navajos*, Cambridge, The Riverside Press, 1927.

Tilpin L: *The Enduring Navajo*. Austin, University of Texas Press, 1968.

Courtesy Amon Carter Museum, Fort Worth

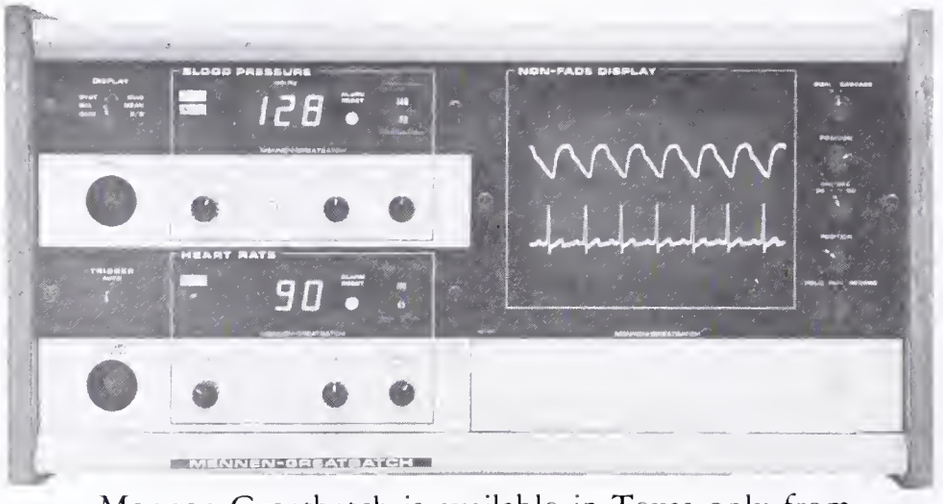
GENTEC FEATURES A TEXAS EXCLUSIVE: MENNEN-GREATBATCH CLINICAL AND DIAGNOSTIC SYSTEMS

Invest in a Mennen-Greatbatch instrument or system from Gentec Hospital Supply and you get more than the leading patient monitoring equipment.

Gentec can assist you with complete department planning and layout, system design and integration, architectural and electrical outlines, educational aids and programs.

And when your MG equipment goes to work, Gentec backs it with 24-hour service and complete warranty coverage.

See Gentec for the complete line of Mennen-Greatbatch systems, including:
Telemetry Monitoring · Microprocessors In-Patient Monitoring
Computer-Assisted Cath Lab · Data-Base Management · High-Energy Defibrillators



Mennen-Greatbatch is available in Texas only from

gentec
HOSPITAL SUPPLY COMPANY
Division of Foremost-McKesson, Inc. Terrell Supply Division

FORT WORTH/DALLAS, P.O. Box 310 76101, (817) 336-8731, (214) 429-2566 / AMARILLO, P.O. Box 1587 79106, (806) 376-4696
AUSTIN, P.O. Box 4415 78723, (512) 478-2559 / LUBBOCK, P.O. Box 2913 79408, (806) 763-4655 / SAN ANTONIO, P.O. Box 32107 78216, (512) 344-0213 / HOUSTON, P.O. Box 1609 77001, (713) 237-9678

Lifesaving Partnership... Against Cancer Quackery

The anguish associated with cancer is compounded by the cancer quack. False hopes—harmful delays—devastating expenses—deceptive diagnoses—loss of life—these are hazards facing the cancer patient desperate enough to seek a cancer quack.

The problem: how to divert the patient from this tragic encounter.

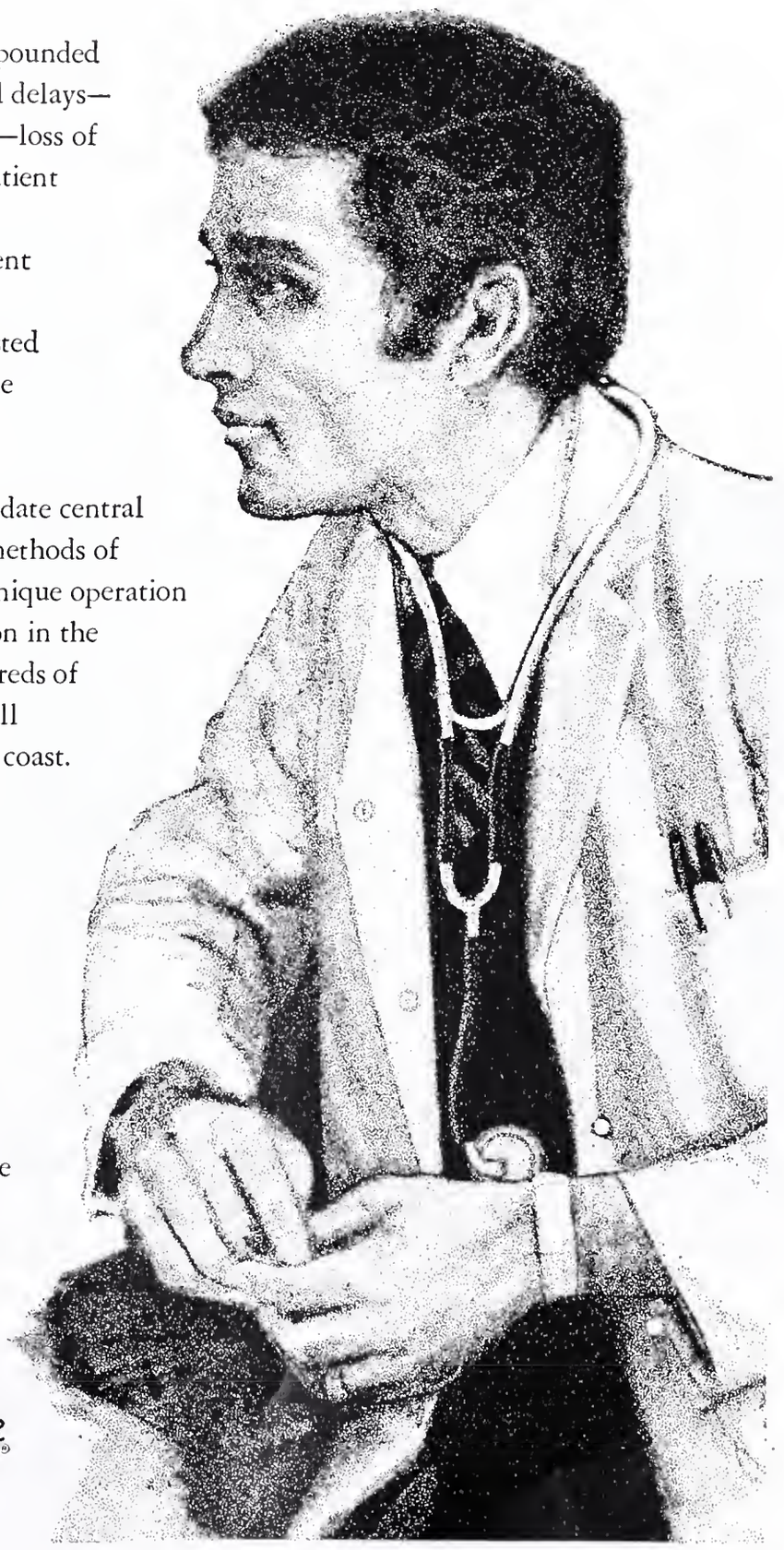
As medical guide, family counselor, trusted friend—you, *doctor,* play a major role in the fight against cancer quackery.

We are here to serve as your partner.

Our National Office maintains an up-to-date central clearinghouse for materials on unproven methods of cancer diagnosis and treatment. This is a unique operation and the principal source of such information in the country. Its services are widely used. Hundreds of inquiries are received and answered from all segments of the community, from coast to coast.

To trigger grass-roots action, we have formulated a model State Cancer Remedy Act designed to control the promotion and sale of unproven methods of cancer management. This has helped to inspire some 20 states to enact or consider legislation against cancer quackery—with active support from the medical community. Copies of the model act, as well as copies of laws in effect, are available through our National and Division offices.

In these actions against cancer quackery, as in all our efforts against cancer, ours is a lifesaving partnership.



American Cancer Society

Texas Division Inc.
P. O. Box 9863
Austin, Texas 78766

Medical Newsmakers

William C. Levin, MD

Richard E. Coggeshall, MD

HEW Secretary Joseph A. Califano has named ANTONIO M. GOTTO, JR, MD, the Bob and Vivan Smith Professor and Chairman of Medicine at Baylor College of Medicine and Chief of the Medical Service at The Methodist Hospital, as one of the seven scientists and five laymen appointed to the newly created National Diabetes Advisory Board. The 23-member board, established by Congress with the passage of the National Diabetes Mellitus Research and Education Act of 1974, is made up of seven clinicians, scientists and health professionals outside the federal government, five representatives from the general public, and the heads of the federal health agencies principally concerned with the problems of diabetes.

GUNTER K. VON NOORDEN, MD, Professor of Ophthalmology at Baylor College of Medicine and Director of Pediatric Ophthalmology at Texas Children's Hospital in Houston, has received the highest honor of ophthalmology in Israel. Dr von Noorden presented the Ticho Memorial Lecture during the Jerusalem Congress on Impaired Vision in Childhood.

Five distinguished physicians were honored at the 87th annual Commencement Exercises of The University of Texas Medical Branch (UTMB) School of Medicine with the presentation of Ashbel Smith Distinguished Alumni Awards. Receiving the 1977 Distinguished Alumni Awards were C. WILLIAM DAESCHNER, MD, professor and chairman of the UTMB department of pediatrics; JESSE B. HEATH, MD, family practitioner, Madisonville; GRIFF T. ROSS, MD, deputy associate director of clinical care, National Institutes of Health (NIH), and deputy director of the Clinical Center, NIH Bethesda, brother of William F. Ross, MD; RALEIGH R. ROSS, MD, thoracic surgeon, Austin; and JAMES M. VAUGHN, MD, physician in eye, ear, nose, and throat, Tyler.

WILLIAM C. LEVIN, MD, president of The University of Texas Medical Branch in Galveston has been awarded the Katherine and Nicholas Leone Award for Oustanding Administrative Excellence, presented annually by the Medical Branch. Before taking the duties of president in 1974, Dr Levin served as UTMB professor of internal medicine and Warmoth Professor of Hematology.

Four faculty members at The University of Texas Medical Branch in Galveston have been selected by their students as outstanding educators. Each of the four classes in the School of Medicine chose one instructor for a teaching honor. The freshman class selected RICHARD E. COGGESHALL, MD, chief ultrastructure section, Marine Biomedical Institute, and professor of anatomy and physiology; the sophomore class selected GERALD A. BEATHARD, MD, PhD, associate professor of internal medicine and pathology; the junior class selected JOHN R. CALVERLEY, MD, Warmoth Professor and chairman of neurology and professor of psychiatry; and the senior class selected JAMES C. GUCKIAN, MD, associate professor, internal medicine and microbiology.

Two scientists who discovered a fundamental chemical pathway by which the body controls production of cholesterol have been selected as co-holders of the Paul J. Thomas Chair of Medicine at The University of Texas Southwestern Medical School in Dallas. JOSEPH L. GOLDSTEIN, MD, and MICHAEL S. BROWN, MD, will

re the academic position. For their in-
ative research, Drs Goldstein and Brown
eived the Heinrich Weiland Prize three
rs ago in Germany and the American
emical Society's Pfizer Award in Enzyme
emistry for 1976. Dr Brown joined the
partment of Internal Medicine at South-
stern in 1971. Dr Goldstein is head of
Division of Medical Genetics at South-
stern. The chair was established in
ior of Dr Thomas, a Dallas internist who
been in private practice since 1942.

w officers of the Texas Hospital Associa-
n for 1977-1978 are RICHARD L.
PERSON, administrator of King's
ighters Hospital, Temple, chairman;
LIAM R. COTNER, administrator of
nview Hospital, Fort Worth, immediate
t president and presiding officer of the
use of Delegates; RODERIC M. BELL,
ninistrator of Presbyterian Hospital,
las, chairman-elect; and W. CLAY ELLIS,
ninistrator of Wichita General Hospital,
hita Falls, vice chairman.

e Texas Hospital Association Board of
stees has presented its special Trustees
ards to two members of the Texas Medi-
Association. G. VALTER BRINDLEY,
MD, was honored for his work on the
erican Hospital Association's Regional
dvisory Board, as chairman of the Hos-
al Subcommittee of the Task Force for
aluation of Medicaid in Texas, and as a
egate to the American Medical Associa-
n. WILLIAM F. ROSS, MD, was also hon-
d for his service to the Texas Hospital
sociation.

nored by the American Association for
e Study of Headaches were doctors
NANDA V. DESHMUKH, MD, and JOHN STIRLING MEYER, MD, of Baylor College of Medicine. The two shared the 1977 Harold G. Wolff Award, presented at the association's annual convention in San Francisco.

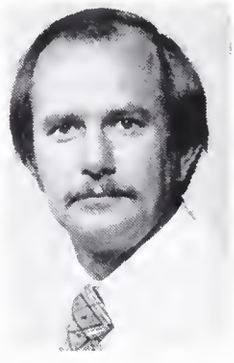
Six new members have been appointed to the Baylor College of Medicine Board of Trustees. The new board members are ALBERT B. ALKEK, Victoria and Houston, a rancher and president and director of Foremost Petroleum; HAROLD S. HOOK, president and director of American General Insurance Company, Houston; JOHN H. BAKER, a partner with the real estate development company of Baker-Winter Interests, Houston; GIBSON GAYLE, JR., an attorney with the Houston firm of Fulbright and Jaworski and 1976-1977 president of the State Bar of Texas; QUENTIN R. MEASE, chairman of the Harris County Hospital District's Board of Managers and president of HELP, Inc., a Houston nonprofit corporation; and MARVIN L. WEST, chairman of the board, First International Bank of Houston.

MAL RUMPH, MD, a Fort Worth physician, has been honored by the Tarrant County Medical Society. Dr Rumph, also a member of the Association of American Physicians and Surgeons, has been honored for many years devoted to trying to keep government and other interventionists from interfering with the medical profession, particularly the physician-patient relationship.

The Texas State Board of Public Welfare has elected HILMAR G. MOORE, mayor of Richmond, as its new chairman. Moore succeeds JAMIE H. CLEMENTS, Temple, who stepped aside after a year in the post but did not resign from the board.

Gerald A. Beathard, MD

John R. Calverley, MD



James C. Guckian, MD

MEDICINE AND THE LAW

TEXAS SUPREME COURT REFUSES TO EXTEND "DISCOVERY RULE" TO MALPRACTICE SUITS ALLEGING MISDIAGNOSIS

The Texas Supreme Court has refused to extend the "discovery rule," which allows suits to be filed within two years after discovery of an injury, to a suit involving an alleged misdiagnosis.[1] The plaintiff-patient filed an action against his doctor more than two years after he had left the doctor's care, but less than two years after the alleged discovery of an injury different from that for which the doctor had prescribed treatment.

Facts

The plaintiff injured his back in June 1971. During August 1971, the defendant-doctor performed a myelogram and other tests, concluded that the plaintiff had a herniated disc at the L4-L5 level, and surgically repaired the disc diagnosed as herniated. The plaintiff continued to see this doctor until late December 1971. During this time he continued to have back pain.

In April 1972, the plaintiff went to another physician who performed a second myelogram and excised a herniated disc at the L3-L4 level.

The plaintiff filed suit in April 1974, claiming that the first doctor had been mistaken in his original diagnosis and had operated on the wrong intervertebral disc. Relying upon the two year statute of limitations, the defendant-doctor moved to dismiss the suit because it was filed more than two years after the 1971 acts that were allegedly negligent.

The plaintiff, however, asserted that since he did not discover, nor in the exercise of ordinary care should he have discovered, the alleged misdiagnosis until he learned the results of the second operation, the two-year period should not begin to run until that time.

Ruling

The trial judge agreed with the doctor and granted summary judgment in his favor based on the bar of the statute of limitations. The Court of Civil Appeals, however, held that the plaintiff's cause of action did not accrue until discovery and ordered the case sent back to the trial court to determine when the plaintiff knew or should have known of his injury.

The Supreme Court reversed the Court of Civil Appeals and affirmed the judgment of the trial court in the doctor's favor, holding that the "discovery rule" will not be extended to apply to cases involving an alleged misdiagnosis.

Discussion

The purpose of statutes of limitations is to compel the exercise of a cause of action within a reasonable period, so that the defendant can develop his defense while the witnesses are still available and the evidence still fresh in their minds.

Obviously, no matter what time period is applied, some meritorious claims will be cut off if the plaintiff does not discover the injury until after the statute has run. However, the preclusion of a legal remedy must be balanced against the purpose of preventing litigation of stale and nonmeritorious lawsuits.

Until modified in 1975 and 1977,[2] Texas law of statutes of limitations provided that any action "for injury done to the person of another" must be commenced and prosecuted within two years after the cause of action accrues.[3] Generally, the pre-1975 statute began to run when the negligent act or the injury occurred.

However, in a limited area of malpractice claims, the Texas Supreme Court had applied the "discovery rule," meaning that the two-year period begins when the plaintiff discovers the injury or in the exercise of ordinary care when the patient should have discovered the injury.

In *Gaddis v Smith*,[4] the plaintiff sued for injuries caused by a sponge left in the wound after an operation, and the court held that the two-year period did not begin to run until the patient learned of, or in

the exercise of reasonable care and diligence should have learned of the presence of the foreign object.

Similarly, in *Hays v Hall*,[5] the court applied the "discovery rule" in an action based on the negligent performance of a vasectomy. In addition, without writing an opinion, the court had indicated "no reversible error" in *Grady v Faykus*,[6] a case where the Court of Civil Appeals applied the rule to allegedly negligent radiation treatment resulting in ulcerated epidermis.

Distinguishing the circumstances found in these prior decisions, the Supreme Court refused to extend the "discovery rule" to cover suits based on alleged misdiagnosis, because that type of claim involves many factors not present in "foreign object" and related cases. The rule had previously been applied only in situations where the injury to the plaintiff was obvious and without question.

However, if a claim is based on misdiagnosis, even the fact that the patient suffered an injury because of the diagnosis in question is uncertain. Such speculative claims, resting as they do on matters of professional judgment and discretion, entail a greater danger of false or frivolous lawsuits.

Moreover, in most misdiagnosis cases, there is no clear physical evidence that establishes the negligence of some person. The majority of the court believed that the greater potential for frivolous claims tipped the balance in favor of a stricter application of the statute of limitations, and therefore, declined to extend application of the "discovery rule."

Four of the nine judges disagreed with the majority holding and joined in a dissenting opinion. The dissenters pointed to other states where broader application of the "discovery rule" in all malpractice cases is said to represent a case law trend, and the dissenters felt that Texas should follow those decisions.

Stressing the occasional harshness of cutting off a plaintiff's right to recover before he is aware of injury, the dissenting judges would consider the treatment prescribed by the doctor as the objective fact (like the sponge in the wound) establishing negligent diagnosis, since treatment generally follows diagnosis.

Conclusion

A case involving an alleged misdiagnosis presents significant possibilities for the assertion of nonmeritorious claims. Extension of the "discovery rule" to cover such cases would increase the potential for claims being filed at a time when witnesses are no longer available and the evidence is stale, thereby making the task of defending these cases even more difficult and more costly.

An extension of the rule to cover misdiagnosis cases would have created much uncertainty about how far the court intended to extend application of the "discovery rule," and that uncertainty could have fostered additional litigation attempting to probe the boundaries.

The court wisely limited its previous holdings and continued a more restricted application of the "discovery rule" in alleged malpractice cases.

Jack Maroney and Will Barber
Brown, Maroney, Rose, Baker & Barber
TMA Legal Counsel

---

[1]*Robinson v. Weaver*, 20 Tex.Sup.Ct.J. 262 (April 6, 1977, motion for rehearing overruled).

[2]In response to the medical professional liability insurance crisis that surfaced in Texas in 1975, the 64th and 65th Texas Legislatures modified the statute of limitations with respect to alleged medical malpractice cases to eliminate applicability of the "discovery rule." S B 466 (§4), TEX. INS. CODE, Art. 5.82 (§4) (1975); H B 1048 (§10.01) (1977). See Final Report of the Texas Medical Professional Liability Study Commission (Dec 1976) at pp. 11-12.

[3]Article 5526, Revised Civil Statutes of Texas.

[4]*Gaddis v. Smith*, 417 S.W.2d 577 (Tex. 1967).

[5]*Hays v. Hall*, 488 S.W.2d 412 (Tex. 1972).

[6]*Grady v. Faykus*, 530 S.W. 2d 151 (Tex. Civ. App. - Corpus Christi 1975, writ ref'd n.r.e.)

Medicine in literature

EDITOR'S NOTE: This month's bibliography, prepared by the staff of TMA's Memorial Library, lists publications related to snake bites. These and other publications pertaining to this topic are available from the Memorial Library.

SNAKE BITES

Boyden TW: Snakebite in Arizona. *Ariz Med* 33(7):551-553, 1976.

Carter JM, Bevin AG: Venomous snakebites of the extremities. *NC Med J* 37(12):651-654, 1976.

Glass TG Jr: Early debridement in pit viper bites. *JAMA* 235(23):2513-2516, 1976.

Glass TG Jr: Early debridement in pit viper bites. *Surg Gynecol Obstet* 136:774-776, May 1973.

Glass TG Jr: Snakebite. *Hosp Med* 7:31-55, July 1971.

Huang TT, Lynch JB, Larson DL, et al: The use of excisional therapy in the management of snakebite. *Ann Surg* 179:598-607, May 1974.

Krochmal L, Anderson PC: Copperhead bites: update on therapy. *Mo Med* 73(4):169-172, 178, 1976.

Lockhart WE Jr: Treatment of snakebite. *RI Med J* 60(1):13-15, 51, 1977.

Lockhart WE: Treatment of rattlesnake bite. *Southwest Med* 52(5):99-101, 1971.

Russell FE, Carlson RW, Wainschel J, et al: Snake venom poisoning in the United States; experiences with 550 cases. *JAMA* 233(4):341-344, 1975.

Van Mierop LHS: Poisonous snakebite: a review. 1. Snakes and their vernom. *J Fla Med Assoc* 63(3):191-200, 1976.

Van Mierop LHS: Poisonous snakebite: a review. 2. Symptomatology and treatment. *J Fla Med Assoc* 63(3):201-210, 1976.

Wingert WA, Wainschel J: Diagnosis and management of envenomation by poisonous snakes. *South Med J* 68(8):1015-1026, 1975.

Wingert WA, Wainschel J: A quick handbook on snake bites. *Med Times* 104(4):68-75, 1977.

IN THE TMA LIBRARY

Anderson F: *Practical Management of the Elderly,* ed 3. Oxford, England, Blackwell Scientific Publications, 1976.

Beck LC: *The Physician's Office.* Princeton, NJ, Excerpta Medica, 1977.

Bowers JZ, Purcell EF (eds): *Advances in American Medicine: Essays at the Bicentennial, I, II.* New York, Josiah Macy, Jr Foundation, 1976.

Castroviejo R: *Atlas of Keratectomy and Keratoplasty.* Philadelphia, WB Saunders Co, 1966.

Center for Research in Ambulatory Health Care Administration: *The Organization and Development of a Medical Group Practice.* Cambridge, Mass, Ballinger Publishing Co, 1976.

Cohen HL, Brumlik J: *Manual of Electroneuromyography,* ed 2. Hagerstown, Md, Harper & Row, 1976.

Dubin D: *Rapid Interpretation of EKG's, A Programmed Course,* ed 3. Tampa, Fla, Cover Publishing Co, 1974.

Fraunfelder FT: *Drug-Induced Ocular Side Effects and Drug Interactions*. Philadelphia, Lea & Febiger, 1976.

Fregert S: *Manual of Contact Dermatitis*. Copenhagen, Munksgaard, 1974.

Gryboski J: *Gastrointestinal Problems in the Infant,* Schaffer AJ, Markowitz M (eds). Phildelphia, WB Saunders Co, 1975.

Kaufman HE, Zimmerman TJ (eds): *Current Concepts in Ophthalmology, V*. St Louis, CV Mosby Co, 1976.

Lilienfeld AM, Levin ML, Kessler II: *Cancer in the United States*. Cambridge, Mass, Harvard University Press, 1972.

Longest BB Jr: *Management Practices for the Health Professional*. Reston, Va, Reston Publishing Co, Inc, 1976.

Lüderitz B (ed): *Cardiac Pacing, Diagnostic and Therapeutic Tools*. Berlin, Springer-Verlag, 1976.

Menguy R: *Surgery of Peptic Ulcer*. Philadelphia, WB Saunders Co, 1976.

Mobin-Uddin K (ed): *Pulmonary Thromboembolism*. Springfield, Ill, Charles C Thomas, 1975.

Pierog SH, Ferrara A: *Medical Care of the Sick Newborn,* ed 2. St Louis, CV Mosby Co, 1976.

Schaldach M, Furman S, Hein F, et al (eds): *Advances in Pacemaker Technology*. New York, Springer-Verlag, 1975.

Shapiro S, Schlesinger ER, Nesbitt REL Jr: *Infant, Perinatal, Maternal, and Childhood Mortality in the United States*. Cambridge, Mass, Harvard University Press, 1968.

Simpson LL (ed): *Drug Treatment of Mental Disorders*. New York, Raven Press, 1976.

Taft-Hartley Amendments: Implications for the Health Care Field, Report of a Symposium Sponsored by the American Hospital Association June 27-29, 1975 at the Harrison House, Lake Bluff, Illinois. Chicago, American Hospital Association, 1976.

Williams G: *Color Atlas of Renal Diseases*. Chicago, Year Book Medical Publishers, Inc, 1973.

Williams RG, Tucker CR: *Echocardiographic Diagnosis of Congenital Heart Disease*. Boston, Little, Brown & Co, 1977.

"I can still hear you saying, 'as a board certified obstetrician, I should be able to spay a dog'."

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

R. E. MARTINAK
Dallas, 1913-1976

T. C. MEITZEN
Refugio, 1916-1976

J. B. OWENS, SR
Houston, 1900-1976

E. D. SELLERS
Abilene, 1899-1976

R. F. SOWELL, SR
San Marcos, 1900-1976

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a perr nent memorial to physicians who have served their patients, their profess and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing m than 10,000 reference requests, 3,500 tapes and cassettes, and 2,5 films each year to physicians, students, and to those seeking informat related to medicine and health care. The resources of the Library incl 60,000 volumes, 400 tapes, and 300 scientific and lay films; more t 1,300 professional journals are received monthly. Services are provi without charge.

Contributions to the Texas Medical Memorial Library Fund are invested a permanent fund and are managed by the Board of Trustees of the Te Medical Association. Dividends are used to purchase new books and operate the Library.

TEXAS MEDICAL MEMORIAL LIBRARY FUND

1801 N. Lamar Blvd., Austin, Texas 78701

I enclose the amount of $_____. Given in Memory of_____

Please send remembrance card to:

Name _____

Address _____

City and State _____

Donor Information:

Name _____

Address _____

City and State _____

Deaths

R. E. Martinak, MD

Richard Edward Martinak, MD, 63, a retired obstetrician-gynecologist, died Oct 20, 1976, in Dallas.

Dr Martinak had been a clinical instructor at The University of Texas Southwestern Medical School and a member of the staffs of Parkland Memorial and Baylor hospitals.

A native of East Bernard, Tex, Dr Martinak obtained his premedical training at Sam Houston State Teacher's College in Huntsville, Tex, and at The University of Texas at Austin. In 1939, he was graduated from Baylor College of Medicine. Following a rotating internship and obstetrics-gynecology residencies at Baylor and Parkland Memorial hospitals, Dr Martinak opened his Dallas practice in 1946. He retired in 1970.

During 1942-1945, Dr Martinak was a member of the US Army medical corps. He was stationed at Ft Sam Houston, Tex, and in Africa and Italy. After World War II, he joined the Army Reserve and attained the rank of Major.

The physician's professional memberships included Dallas County Medical Society, the American Medical Association, Southern Medical Association, and Dallas Southern Clinical Society. He also was a founding fellow of the American College of Obstetricians and Gynecologists and a fellow of the American College of Surgeons. He was a member of Theta Kappa Psi medical fraternity and the Sertoma Club of Dallas.

Surviving Dr Martinak are his wife, Macy Ann Billingsley Martinak, Dallas; daughter, Jeanne Redmond, San Antonio; son, Michael R. Martinak, Dallas; mother, Mollie Bridwell, Dallas; and four grandchildren.

T. C. Meitzen, MD

Travis Charles Meitzen, MD, Refugio, died Dec 15, 1976.

Dr Meitzen, 60, retired in 1975 following 30 years of general practice in Refugio. He was the 1972 recipient of the Chamber of Commerce Citizen of the Year Award for outstanding community service and a former member of the Refugio school board.

A native of Denison, Tex, Dr Meitzen was a graduate of The University of Texas at Austin (1938) and The University of Texas Medical Branch, Galveston (1941). His internship was at the City-County Hospital, El Paso. During 1942 through 1946, he served in the U.S. Army.

Dr Meitzen was president of the San Patricio-Aransas-Refugio County Medical Society in 1949 and served as chief of staff of the Refugio County Hospital in 1975. His other professional memberships included the American Medical Association and American Academy of Family Physicians.

The doctor also had farming and ranching interests and actively pursued his hobby of ornithology, a branch of zoology dealing with birds. His collection of bird eggs was donated to the Western Foundation of Vertebrate Zoology in Los Angeles.

Surviving Dr Meitzen are his wife, Velma Creel Meitzen, Refugio; daughter, Dinah Meitzen Osborne, Houston; sons, Travis Meitzen, San Angelo, Tex, and Blocker Meitzen, Denver; brothers, Marion Meitzen, Rosenberg, Tex, and Logan Meitzen, Navasota, Tex; sisters, Irene Anderson, Sherman, Tex, and Imogene Briggs, Denison; and four grandchildren.

J. B. Owens, Sr, MD

John Brown Owens, Sr, MD, 76, died Nov 22, 1976. Dr Owens had practiced in Houston for 31 years.

Dr Owens was born in Portage, Wis. He attended Emmanuel Missionary College, Berrien Springs, Mich, before entering the College of Medical Evangelists. Following his graduation from medical school in 1931, Dr Owens was an intern at Nashville (Tenn) General Hospital and a resident at Long Island Hospital, Boston. In 1934, he began a general practice in Veedersburg,

Dr Sowell

Ind. He remained in Veedersburg until 1945, when he moved to Houston.
Dr Owens was a member of Harris County Medical Society and the American Medical Association. He also was an active member of the Seventh Day Adventist Church.
Surviving Dr Owens are his wife, Mae Owens, Houston; sons, Edwin E. Owens, MD, Harlingen, Tex, and John B. Owens, Jr, MD, Saudi Arabia; one sister, two brothers, and three grandchildren.

E. D. Sellers, MD

Erle Dees Sellers, MD, an honorary member of Texas Medical Association, died Nov 18, 1976, after a long illness.
Dr Sellers, 77, retired in 1962. He had practiced in Abilene for 36 years.
Dr Sellers completed his undergraduate education at Mercer University in his native city, Macon, Ga, in 1918. He attended Emory University School of Medicine, Atlanta, during 1919-1921, and in 1923 received his MD from Columbia University College of Physicians and Surgeons, New York. Dr Sellers remained in New York until 1926 to complete his internship and residency at New York Hospital. He practiced for a short time in Atlanta before moving to Abilene.
An internist with secondary specialties in allergy and roentgenology, Dr Sellers belonged to numerous professional organizations. These included the Southern Medical Association, American College of Physicians (fellow), American College of Allergy (fellow), Texas Internists Club, Texas Radiological Society, and American Medical Association.
He also was president of the Taylor-Jones County Medical Society in 1933 and in 1948, director-at-large of the Texas Tuberculosis Association, an examiner for the Selective Service during World War II, and chairman of the general staff of Hendrick Memorial Hospital.
He was a member of the First Baptist Church, and Alpha Kappa Kappa and Sigma Alpha Epsilon fraternities.
Surviving Dr Sellers are his wife, Nellie Parramore Sellers, Abilene; daughter, Mrs Robert H. (Eleanor) Hoppe, Abilene; son, Dr Dilworth Parramore Sellers, Colorado Springs, Colo; brothers, Dr T. F. Sellers, Atlanta; Ashley Sellers, Washington, DC; and Mannie Sellers, Alexandria, Va; and five grandchildren.

R. F. Sowell, Sr, MD

Rugel Frierson Sowell, Sr, MD, 76, died of a coronary occlusion in an Austin hospital Dec 3, 1976.
Dr Sowell, who had practiced in San Marcos for almost 45 years, was born in Forney, Tex. He was a graduate of Trinity University, Waxahachie, Tex, and Tulane University School of Medicine, New Orleans (1927). His internship was at Forney Sanitarium and Training School.
Dr Sowell moved to San Marcos in 1928. Prior to 1928, he practiced for short periods in Forney and Kyle, Tex. He retired from his family practice in 1973.
The physician was active in San Marcos community affairs, having served as an elder in the First Presbyterian Church and as president of the First Federal Savings and Loan Association for 35 years. He also was a member of the Hays-Blanco-Caldwell County Medical Society and was president of the group in 1930.
Surviving Dr Sowell are his wife, Christine Pierce Sowell; son, Rugel F. Sowell, Jr, MD; and daughter, Dianne Sowell Padgett, all of San Marcos; brothers, Frederick Sowell, San Marcos, and Dr L. B. Sowell, Houston; sister, Flora Barber, San Marcos; and five grandchildren.

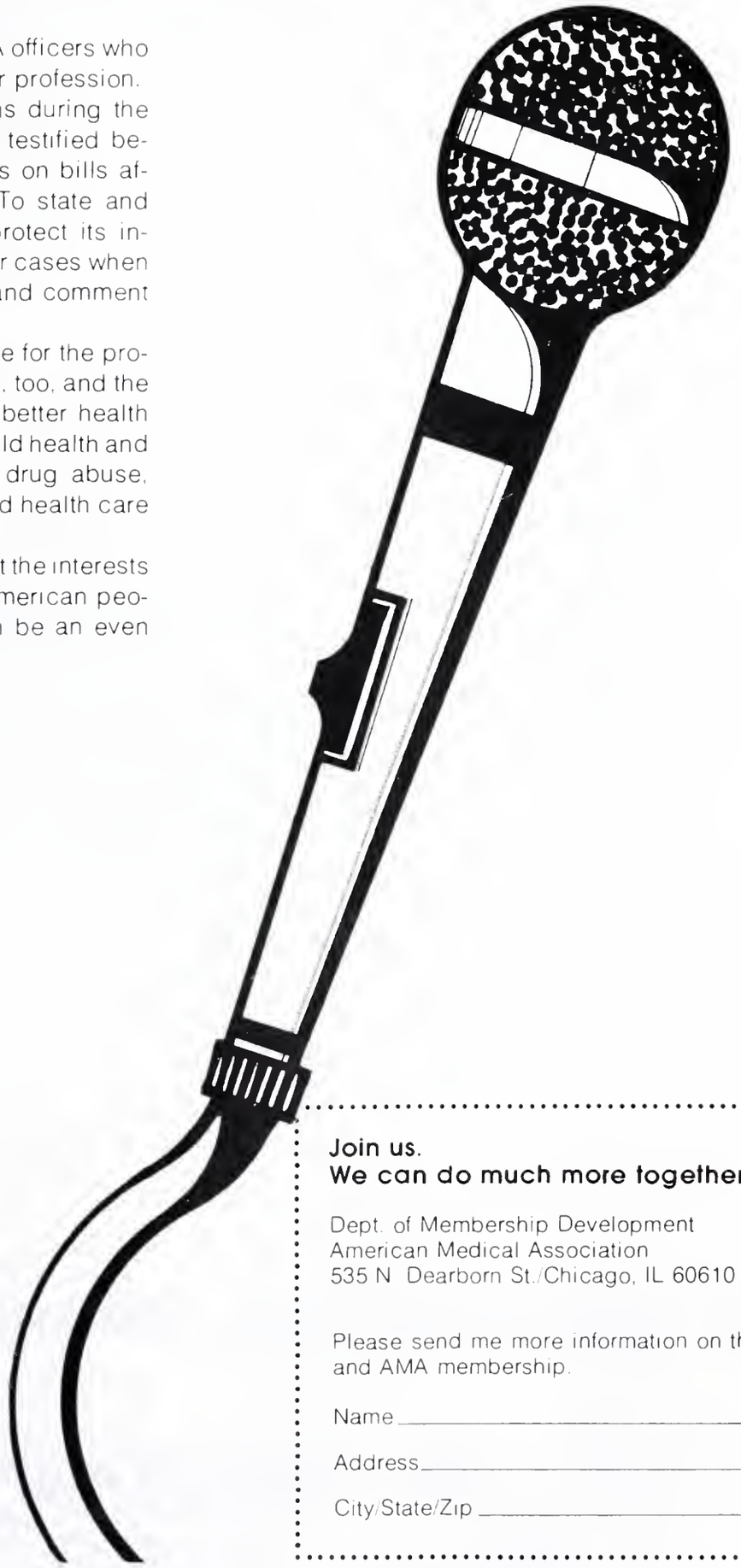
"Mr. Chairman, Members of the Committee, I am Dr. Holden ... Dr. Palmer ... Dr. Beddingfield ... Dr...."

These were but a few of the many AMA officers who have gone to the Hill to represent our profession.

On more than two dozen occasions during the 94th Congress, AMA representatives testified before Congressional health committees on bills affecting the delivery of health care. To state and explain our profession's views. To protect its interests. In addition, there were 72 other cases when the AMA submitted written analysis and comment on legislation.

But the AMA isn't solely an advocate for the profession. It's an advocate for the public, too, and the passage of legislation for more and better health care. Legislation such as maternal, child health and crippled children services. Alcohol, drug abuse, and mental health programs. Improved health care for American Indians.

The AMA goes to the Hill to represent the interests of the American physician and the American people. With your support, the AMA can be an even more effective spokesman.



Join us.
We can do much more together.

Dept. of Membership Development
American Medical Association
535 N. Dearborn St./Chicago, IL 60610

Please send me more information on the AMA and AMA membership.

Name _____

Address _____

City/State/Zip _____

MEDICAL ARTS CLINIC ASSOCIATION of corsicana

ANESTHESIOLOGY
LARRY R. STEVENER, M.D., F.A.C.A.

DERMATOLOGY & SYPHILOLOGY
JOSEPH M. GLICKSMAN, M.D., F.A.A.D.*
J. D. SMITH, M.D., F.A.A.D.*

FAMILY PRACTICE
ENNIS, TEXAS
W. B. KINZIE, MD., D.A.B.F.P.

GENERAL & VASCULAR SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S*
E. SCOTT MIDDLETON, M.D., F.A.C.S.*

GENERAL, VASCULAR & THORACIC SURGERY
ROSS B. REAGAN, M.D.*

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
ALLEN M. JONES, M.D.*
JOHN D. NELSON, M.D.*
L. BRYAN COTTON, JR., M.D.*
KENT ROGERS, M.D.*
JACK B. BANKHEAD, M.D.

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
W. GENE MURFF, M.D., F.A.C.O.G.*
NEAL GREEN, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D., F.A.A.O.O.*

ORTHOPAEDIC SURGERY
WALLACE E. LOWRY, JR., M.D.*
JAMES A. DOTSON, M.D.*

PATHOLOGY
MARY G. BANKHEAD, M.D.*

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D., F.A.A.P.*
MASON P. GILFOIL, M.D.

UROLOGY
WILLIAM V. HALL, M.D., D.A.B.U., F.A.C.S.*

EXECUTIVE DIRECTOR
DON L. BOWEN, M.G.M.A.

*DIPLOMATE OF THE AMERICAN BOARD

TRAVIS CLINIC FOUNDATION AND TRAVIS CLINIC ASSOCIATION

JACKSONVILLE, TEXAS

STAFF

General Surgery:
L. L. Travis, M.D., Emeritus
Ken E. Kuykendall, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.

Pathology:
Harbert Davenport, Jr., M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
Mary A. Bone, M.D.
J. A. Armstrong, M.D.
D. B. Turner, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Dermatology:
T. S. Arrington, M.D.

Pediatrics:
M. L. Gray, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

Podiatry:
Daniel H. Phelps, D.P.M.

Psychology:
Charles T. Fries, Ed.D.

Business Manager:
Gerald L. Burks

We have your best interest at heart.

Give Heart Fund
American Heart Association

Texas Physicians' Directory

DIRECTORY RATES & DATA: Space is available to TMA members at $12.50 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. Section headings are limited to those specialties designated by the American Medical Association. A list of these specialties is available upon request. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Clinics

THE FORT WORTH CLINIC
1221 West Lancaster Avenue, Fort Worth, Texas 76102
Telephone 817 336-7191

INTERNAL MEDICINE
Kendra J. Belfi, M.D.
John M. Church, M.D.
Thomas J. Coleman, M.D.
Robert R. Dickey, M.D.
Ferd E. Garrison, Jr., M.D.
Cortell K. Holsapple, M.D.
John E. Johnson, Jr., M.D.
O. M. (Jack) Phillips, M.D.

GENERAL SURGERY
John H. Sewell, M.D.
Robert L. Sewell, M.D.

ORTHOPEDIC SURGERY
Thomas E. Rapp, M.D.

CONSULTANTS IN RADIOLOGY
Victor E. McCall, M.D.
Dixon Presnall, M.D.
Harry H. Whipp, M.D.

FIFTH AVENUE CLINIC
650 Fifth Avenue, Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

MEDICAL ASSOCIATES OF CORPUS CHRISTI, P.A.
1533 South Brownlee, Corpus Christi, Texas 78404
Telephone 883-7411

FAMILY MEDICINE
Travis B. Phelps, M.D., F.A.A.F.P.
T. D. Harvey, M.D., A.B.F.P.
H. R. Rose, M.D., A.B.F.P.
C. L. Vernor, M.D.
Frederick S. Maurer, M.D.

ORTHOPEDIC SURGERY
C. M. Yanez, M.D., F.A.C.S.

INTERNAL MEDICINE
G. A. Reeves, M.D.
Pruett Moore, Jr., M.D.
Mark G. Strauss, M.D.

EXECUTIVE DIRECTOR
Gene Hybner

DIRECTOR OF NURSES
Pat Parker, R.N.

Remind your colleagues of your specialty and office location. Purchase a listing in the "Texas Physicians' Directory."

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

INTERNAL MEDICINE
C. M. Maruri, M.D.
A. J. Nodarse, M.D.

GENERAL SURGERY
B. W. Hink, M.D., F.A.C.S.

FAMILY MEDICINE
J. H. Cochrane, Jr., M.D., F.A.A.F.P.
J. W. O'Bryant, M.D.
A. A. Piske, M.D.

FAMILY MEDICINE AND GENERAL SURGERY
Salvador Faus, M.D.

CLINIC MANAGER
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

MALONE AND HOGAN CLINIC
1501 West 11th Place, Big Spring, Texas 79720, Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.
W. B. Allensworth, M.D.

GENERAL SURGERY
C. B. Marcum, M.D., F.A.C.S.
J. E. Mathews, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
C. T. Moore, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
D. M. Logan, M.D.
V. T. Smith, M.D.

FAMILY PRACTICE
W. R. Strahan, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.
J. W. Kuykendall, M.D.

PEDIATRICS
J. M. Woodall, M.D.
B. R. Owen, M.D., F.A.A.P.

RADIOLOGY & NUCLEAR MEDICINE
Buerk Williams, M.D.
A. P. Goswami, M.D.

UROLOGY
J. W. Cowan, M.D.

PODIATRY
Bradford Glass, D.P.M.

PATHOLOGY
B. A. Campomanes, M.D.

CONSULTANT IN ELECTROENCEPHALOGRAPHY
M. L. Proler, M.D.

ADMINISTRATION
R. L. Helth, Administrator

RUGELEY AND BLASINGAME CLINIC
2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Richard R. Raphael

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.
W. C. Yankowsky, M.D.

UROLOGY
H. Z. Fretz, M.D.

DERMATOLOGY
T. S. Arrington, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

ANESTHESIOLOGY
C. G. Spears, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77030
Telephone 713 797-9191

Internal Medicine and Diagnosis

ALLERGY
Arthur T. Pedersen, M.D.

CARDIOVASCULAR DISEASE
Thomas J. Fatherree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.
Boguslaw Godlewski, M.D.
Matthew T. Monroe, M.D.

DERMATOLOGY
Samuel F. Bean, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Raymond L. Gregory, M.D.
R. Frederick Gregory, M.D.
Thomas J. Hanson, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.
Michael Gagliardi, M.D.
James K. Gordon, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George T. Conklin, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
George Burnazian, M.D.
Benjamin L. Portnoy, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.
James V. Ryan, M.D.

NEPHROLOGY
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

NEUROLOGY
Donald J. Russell, M.D.
George Isaacs, M.D.
Ernesto Infante, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.
Harry R. Price, M.D.
Edward L. Middleman, M.D.
Martin J. Hrgovic, M.D.

PATHOLOGY
Paul B. Radelat, M.D.
Ashok M. Balsaver, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.
Martin L. Kaplan, M.D.
Louis C. Waddell, Jr., M.D.

RADIOLOGY
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.
Joe B. Wilson, M.D.
Howard J. Pollock, M.D.

NUCLEAR MEDICINE
Donald A. Podoloff, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
Robert B. Hall,
Administrator
Richard V. Vanderslice,
Assistant Administrator

HOUSTON HEADACHE CLINIC
Park Plaza Professional Building
1213 Hermann Drive, Suite 855
Houston, Texas 77004
(713) 528-1916

Neurology
Ninan T. Mathew, M.D., F.R.C.P.(C)

Allergy

HOUSTON ALLERGY CLINIC
Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Richard H. Jackson, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Warren J. Raymer, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
D. W. Waddell, M.D., F.A.A.C.I.A.
Ramon Garrido, M.D., F.A.C.A., F.A.A.C.I.A.*
(Certified American Board of Pediatrics)
*Diplomate American Board of Allergy & Immunology

Suite 444, Hermann Professional Building
6410 Fannin St., Houston, Texas 77030, 713 797-0900

PETER B. KAMIN, M.D., P.A.
Certified American Boards of Pediatrics and Allergy
Diplomate American Board of Allergy and Immunology
Allergy and Immunology

Suite 601, Oak Hills Medical Building
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Phone 512 696-4405 or 227-6331

TMA Group Insurance Plans
. . . Another service of your association

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

JOHN P. McGOVERN, M.D.
Director-Consultant

THEODORE J. HAYWOOD, M.D.
ORVILLE C. THOMAS, M.D.
JOSEPH T. QUENG, M.D.
LAWRENCE G. THORNE, M.D.
K. VENUGOPALAN, M.D.
ROBERT E. SMITH, M.D.
JAMES A. AYERS, M.D.
EUNICE W. CHOU, M.D.
ALBERT LEHMANN, M.D.
GERALD T. MACHINSKI, M.D.

Research Associates
MICHAEL H. SMOLENSKY, Ph.D.
ALAIN REINBERG, M.D., Ph.D.
CALVIN J. McLERRAN, Ph.D.
MICHAEL A. McCORMICK, Ph.D.
GLENNA M. KYLE, M.S.
ITING MAY LU, M.S.

Consultants

EVAN M. HERSH, M.D.
JUDITH H. MARSTON, Ph.D.
Immunology

JAMES A. KNIGHT, M.D.
Psychiatry

HERBERT C. McKEE, Ph.D.
RICHARD K. SEVERS, Ph.D.
Air Pollution

CAROLYN S. LEACH, Ph.D.
Clinical Laboratories

JOHN A. THOMAS, Ph.D.
Clinical Pharmacology

THOMAS D. DOWNS, Ph.D.
Biometrics

WARREN E. SCHALLER, H.S.D.
Allied Health Sciences

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025, 713 661-1444

CORPUS CHRISTI ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology

2530 Morgan, Corpus Christi, Texas, 882-3487

STUART ALAN MASON, M.D., P.A.
Fellow American Association for Clinical Immunology and Allergy
Fellow of the American College of Allergists
Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

ALLERGY AND IMMUNOLOGY
Joseph T. Sams, M.D., P.A. or C. David Meadows, M.D., P.A.
Diplomates of the American Board of Allergy and Immunology

900 W. Randol Mill Rd., Suite 215, Arlington, Texas 76012, 817 277-1161

CHARLES A. RUSH, JR., M.D.
Diplomate/American Board of Allergy & Immunology
Fellow, A.A.A., A.C.A., A.A.C.I.A.

Northeast Medical Clinic Association
7601 Glenview Drive
Fort Worth, Texas 76118

FREDERICK W. GROVER, M.D. & ASSOCIATES
Diplomate of the American Board of Allergy and Immunology
Allergy and Immunology
Children and Adults
6114 Sherry Lane, Preston Center, Dallas, Texas 75225
Telephone: (214) 363-7790

MEMORIAL LIBRARY
TEXAS MEDICAL ASSOCIATION
1801 North Lamar Blvd., Austin, Texas 78701, 512 477-6704

A clinical library designed to assist the practicing physician
50,000 bound volumes • extensive reprint and periodical collection
• 400 lay and professional films • pathological slide sets
• cassette and reel-to-reel tapes from AMA, Audio Digest
• MEDLINE computer data service

. . . Another service of your association

Colon & Rectal Surgery

ALVIN BALDWIN, JR., M.D.
Diplomate American Board of Colon and Rectal Surgery

R. D. DIGNAN, M.D.
Diplomate American Board of Surgery
Diplomate American Board of Colon and Rectal Surgery

Suite 1209 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246
Telephone 824-2573

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery

2715 Fannin Street, Houston, Texas

C.D.L. CROMAR, M.D., M.S., F.R.C.S.E., F.R.C.S.C.
Surgery of the Rectum and Colon

Suite 8, 3337 Plainview, Pasadena, Texas 77504

FT. WORTH PROCTOLOGIC CLINIC, P.A.
Colon and Rectal Surgery and Colonoscopy

Sommai Sehapayak, M.D.
Diplomate American Board of Colon and Rectal Surgery

Medical Tower, Suite 210, 1550 West Rosedale,
Fort Worth, Texas 76104, 817-338-4501 (24 hours)

SUVID PITA, M.D.
Colon and Rectal Surgery
Colonoscopy

Barnett Tower, Baylor Medical Plaza
3600 Gaston Ave, Suite 411
Dallas, Texas 75246
Telephone 214 821-4300

MANUEL G. LAGON, M.D., F.A.C.S.
Diplomate American Board of Colon and Rectal Surgery

FORT WORTH COLON AND RECTAL CLINIC, P.A.
Colonoscopy, Colon and Rectal Surgery

909 Eighth Avenue, Fort Worth, Texas 76104; Telephone 332-1371

Dermatology

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy

1400 Eighth Street, Wichita Falls, Texas

DRS. PIPKIN AND RESSMANN
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies

714 Medical Arts Bldg., San Antonio, Texas 78205

J. GILMORE BRAU, M.D.
Dermatology and Syphilology
X-Ray and Radium Therapy

Hours 9 to 1—3 to 5
3817 Brown Street, Dallas, Texas

JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
A Professional Association
Dermatology, Syphilology, and Cancer of the Skin

3801 19th St., Suite 500, Lubbock, Texas 79410

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies

7777 Forest Lane, Suite 214, Dallas, Texas 75230; Phone 661-7460

GERALD A. CASID, M.D., P.A.
Skin Diseases—Skin Tumors
Hair Transplantation, Dermabrasion, Chemical Peels

333 N. Shiloh Rd., Garland, Texas 75042
Phone 214 272-5451

DAVID S. ALKEK, M.D. AND ASSOCIATES
LON E. ROGERS, M.D.
Dermatology and Cancer of the Skin
Dermabrasion and Chemical Peel

8226 Douglas Avenue, Suite 755
Dallas, Texas 75225
Ph: 214 691-6691

Medical City
7777 Forest Lane
Dallas, Texas 75230

WILLIS I. COTTEL, M.D.
Practice Limited to Skin Cancer
Moh's Chemosurgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960

Endocrinology

ENDOCRINE ASSOCIATES OF DALLAS, P.A.
STANLEY FELD, M.D.
RICHARD SACHSON, M.D.
Practice Limited to Endocrinology

Douglas Plaza Bldg., Telephone: 363-5535
8226 Douglas Avenue, Dallas, Texas 75225

Family & General Practice

GLENN C. COATES, M.D.*
GENE V. HAVERLAH, M.D.
SAM A. NIXON, M.D.*
EUGENE M. TOKAR, D.D.S.
1303 Hospital Blvd., Floresville, Texas 78114, 512 393-2527
*Diplomate American Board of Family Practice

SAMUEL SILVA, M.D.
Hair Transplantation

4759 South Freeway, Fort Worth, Texas, 817 923-7374

TMA Members' Retirement Trust (Keogh)

. . . Another service of your association

Gastroenterology

CECIL O. PATTERSON, M.D., F.A.C.P.
Gastroenterology, Gastroscopy, Esophagoscopy

1414 Medical Arts Building, Dallas, Texas, 742-6141-44

MILFORD O. ROUSE, M.D., F.A.C.P.
Consultations in hospitals only

DRS. BAILEY, DOUGLAS AND DEVANEY ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas

Diseases of the Digestive System

Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
George T. DeVaney, M.D.
Nisar Ahmed, M.D.

KALMAN NARAYAN, M.D.
Diplomate American Board of Internal Medicine

Gastroenterology, Gastroscopy, Colonoscopy, Polypectomy, E.R.C.P.

909 8th Ave., Suite 7, Ft. Worth, Texas 76104. 817 336-9055

General Surgery

BURT B. SMITH, M.D., F.A.C.S.
Surgery

Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery

728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery

General Surgery

1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Thoracic Surgery

Vascular, General and Thoracic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue,
Dallas, Texas 75246, 821-2356

ROBERT J. TURNER, III, M.D., F.A.C.S.
Diplomate American Board of Surgery

General and Peripheral Vascular Surgery

The Saint Joseph Professional Building
1400 South Main Street, Suite 104
Fort Worth, Texas 76104, 335-8311

ROBERT M. STECKLER, M.D.
Diplomate American Board of Surgery

Head and Neck Surgery, Surgery, and Surgical Oncology

Baylor Medical Plaza, Suite 1008, 3600 Gaston Avenue,
Dallas, Texas 75246, 214 827-9880

ROBERT DAVIS, M.D., M.B., B.Ch. (Rand), F.R.C.S. (Edin.)
General Surgery

430 Park Plaza Professional Building, 1213 Hermann Drive,
Houston, Texas 77004; 713 528-0597
By Appointment

Gynecology

RAYMOND H. ABRAMS, M.D., F.A.C.O.G.
Diplomate American Board of Obstetrics and Gynecology

Gynecological and Reconstructive Surgery

3434 Swiss Avenue, Suite 401, Dallas, Texas 75204
Telephone 214 823-1063

Hand Surgery

L. Lee Lankford, M.D. and Peter R. Carter, M.D.
HAND SURGERY ASSOCIATION
Hand Surgery and Upper Extremity Reconstructive Surgery

Baylor Medical Plaza, Barnett Tower, Suite 802, 3600 Gaston Avenue
Dallas, Texas 75246, 214 823-5351

Neurological Surgery

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery

Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Morris Sanders, M.D.
Phillip E. Williams, Jr., M.D.
Ira C. Denton, Jr., M.D.
W. Robert Hudgins, M.D.
Jack Woolf, M.D., Consultant

5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620,
Dallas, Texas 75235; 214 637-0420

8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905,
Dallas, Texas 75231; 214 369-7596

3600 Gaston Avenue, Barnett Tower, Baylor Medical Plaza, Suite 310,
Dallas, Texas 75246; 214 826-1976

JACK STERN, M.D.
GARY C. HUTCHISON, M.D.
THOMAS R. BOULTER, M.D.
Neurological Surgery

8210 Walnut Hill Lane, Suite 805, Dallas, Texas 75231, 363-8524

RONALD SMITH, M.D.
Neurological Surgery

901 South Lake, Fort Worth, Texas, 336-0551

EL PASO NEUROLOGICAL INSTITUTE
Professional Association

Neurology, Neurosurgery, Electroencephalography
Neuro-Radiology, Physiotherapy

William J. Nelson, M.D., Neurosurgery
John T. O'Neal, M.D., Neurosurgery
Robert D. Schneider, M.D., Neurology and Electroencephalography
Steven K. Crouse, M.D., Neurology and Electroencephalography

Medical Plaza Bldg., Suite 307
El Paso Medical Center
1501 Arizona Avenue, El Paso, Texas 79902
Telephone 915 532-8901

TMA International Travel Program
. . . Another service of your association

CHERRY-LONG NEUROSURGERY ASSOCIATION
GLENN R. CHERRY, M.D., D.A.B.N.S., F.A.C.S.
R. GORDON LONG, M.D., D.A.B.N.S., F.A.C.S.
BENNIE B. SCOTT, M.D.
Neurological Surgery
Baylor Medical Plaza — 605 Barnett Tower
3600 Gaston Avenue — Dallas, Texas 75246
Telephone 214 826-7060

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D., F.A.C.S.
E. FLOYD ROBINSON, M.D.
Neurological Surgery
2210 Maroneal, Houston, Texas 77025, 523-3684

TEXAS NEUROLOGICAL INSTITUTE AT DALLAS, P.A.
Neurological Surgery
James E. Bland, M.D.
Martin L. Lazar, M.D.

Director, Pain Relief Center and Neuroanesthesiologist
P. Prithvi Raj, M.D.

Medical Neurology, Electroencephalography and Electromyography
Ralph G. Greenlee, Jr., M.D.
Allan L. Naarden, M.D.
Richard R. North, M.D.
William S. Woodfin, M.D.

Consultant in Speech
Josephine Simonson, M.A.

Neuro-Ophthalmology
Peter R. Bringewald, M.D.

7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

SOUTHWEST NEUROSURGICAL ASSOCIATES
Richard H. Moiel, M.D.
Frank S. Yelin, M.D.
Homero R. Anchondo, M.D.
Arthur Evans, M.D.

601 Medical Towers, Houston, Texas 77030; 713 790-0795
7777 Southwest Freeway, #942, Houston, Texas 77074
902 Frostwood, #224, Houston, Texas 77024

Nuclear Medicine

NUCLEAR MEDICINE LABORATORIES OF TEXAS
Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., M.D., F.A.C.N.M.
Director - 713 790-0540
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, JR., M.D., F.A.C.N.M.
Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540

Diplomate American Board of Nuclear Medicine

Occupational Medicine

Eric G. Comstock, M.D.
Diplomate American Board of Medical Toxicology

OCCUPATIONAL TOXICOLOGY
1802 Medical Towers, Houston, Texas 77030; 713 790-0160

Ophthalmology

HOUSTON EYE ASSOCIATES
1100 Hermann Prof. Bldg., Houston, Texas 77030, 713 790-1100

Richard S. Rulz, M.D., F.A.C.S.
Charles E. Russo, M.D., F.A.C.S.
Malcolm L. Mazow, M.D., F.A.C.S.
Robert H. Stewart, M.D., F.A.C.S.
Robert B. Wilkins, M.D., F.A.C.S.
Jeffrey D. Lanier, M.D., F.A.C.S.
Michael A. Bloome, M.D., F.A.C.S.
Paul C. Salmonsen, M.D.
Richard L. Kimbrough, M.D.

DRS. ALPAR, TAYLOR, HOWELL, CURRIE & WEINBERGER
Ophthalmology
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Hugh B. Currie, M.D.
Bruce L. Weinberger, M.D.
Diplomates of the American Board of Ophthalmology
15 Medical Drive, Amarillo, Texas

TEXAS RETINA ASSOCIATES
Albert Vaiser, M.D.
William B. Snyder, M.D.
William L. Hutton, M.D.
Diseases and Surgery of the Retina and Vitreous

318 Medical Arts Building, Dallas, Texas, 748-0958

BRUCE C. TAYLOR, M.D.
RICHARD L. WINSLOW, M.D.
Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E., Dallas, Texas 75204
214 521-1153

McPHERSON ASSOCIATES
Diseases and Surgery of the Retina and Vitreous
Alice R. McPherson, M.D.
Robert A. Moura, M.D.
Arthur W. Willis, M.D.
Robert W. Butner, M.D.

6436 Fannin, Suite 800, Houston, Texas 77030
713 797-1903

EYE ASSOCIATES
Diseases and Surgery of the Eye
Charles A. Sargent, M.D.
Alan C. Baum, M.D.

3838 Hillcroft, #415, Houston, Texas 77027, 713 781-2882

CORPUS CHRISTI EYE ASSOCIATES
J. Gordon Bryson, M.D.
C. A. Struve, M.D.
John W. Lewis, M.D.

3166 Reid Drive, Corpus Christi, Texas 78404, Phone 853-7319

EYE CENTER OF AUSTIN
3913 Medical Parkway
Austin, Texas 78756; 512 451-8484

Edward J. Petrus, M.D.
Richard E. Nieman, M.D.

JOHN Y. HARPER, JR., M.D., P.A.
Diseases & Surgery of the Vitreous and Retina

601 Madison Square Medical Building
311 Camden Street, San Antonio, Texas 78212
512 226-1812

TMA Physicians' Placement Service
. . . Another service of your association

PETER R. BRINGEWALD, M.D.

Neuro-Ophthalmology

Texas Neurological Institute at Dallas, P.A.
7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

By appointment only.

COASTAL BEND EYE ASSOCIATES

Jack A. Sahadi, M.D.

712 Booty Street, Corpus Christi, Texas 78404
Telephone 512 888-4288

Orthopedic Surgery

H. H. Beckering, M.D.
L. Ray Lawson, M.D.
George Truett James, M.D.
Robert D. Vandermeer, M.D.
Wynne M. Snoots, M.D.
R. Stephen Curtis, M.D.

W. B. CARRELL MEMORIAL CLINIC

A Professional Association
2828 Lemmon Ave., Dallas, Texas

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas

Louis J. Levy, M.D.
Henry C. McDonald, Jr., M.D.
Fred W. Sanders, M.D.
James M. Beckley, M.D.
Joseph H. Gaines, M.D.

Ralph E. Donnell, M.D.
F. Carlton Hodges, M.D.
J. Price Brock, Jr., M.D.

ORTHOPEDIC ASSOCIATES

Diplomates American Board of Orthopedic Surgery

1133 N. 19th St., Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC

Joseph Barnhart, M.D.
Donald T. Lazarz, M.D.
Lee C. Detenbeck, M.D.
Thomas S. Padgett, M.D.

5620 Greenbriar, Houston, Texas 77005, 526-6262 and
Parkway Towers Professional Building, 150 West Parker Road,
Houston, Texas 77022, 691-3905

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr., M.D.
Kenneth C. Scholz, D.D.S., M.D.
W. Ted Sisco, M.D., P.A.
G. S. Gill, M.D.

3702 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

THE ORTHOPEDIC GROUP OF RICHARDSON

Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.

Orthopedic Surgery

812 S. Central Expressway, Richardson, Texas 75080, 231-6396

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr., M.D.
E. E. Rising, Jr., M.D.*
C. Poindexter, M.D.
C. R. Vavrin, M.D.
Frank R. Vincenti, M.D.
Diplomates American Board of Orthopaedic Surgery
*Emphasizing Surgery of the Hand

801 West Randol Mill Road, Arlington, Texas 76012, 817 261-8284

ADDRESS CHANGE? Avoid missing or delayed mail. Send old and new address to Membership Department, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701.

LOUIS W. BRECK, M.D., P.A., F.A.C.S.

Diplomate American Board of Orthopaedic Surgery

Practice Limited to Orthopaedic Surgery

1209 North Kansas, El Paso 79902
Telephone 915 544-3831

THURSTON DEAN, M.D.

Diplomate American Board of Orthopedic Surgery

509 N. Garfield Street
Midland, Texas 79701
Telephone: 915 682-0433 or 682-0163

ORTHOPEDIC ASSOCIATES OF DALLAS

F. Leon Ware, M.D.
Dan R. Sutherland, M.D.
John B. Gunn, M.D.
Richard A. Shirley, M.D.
R. Dan Loyd, M.D.

Orthopedic Surgery

3600 Gaston Avenue, Suite 303
Dallas, Texas 75246; 214 823-7090

Otolaryngology

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.

Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

Otology

DANIEL McNAMARA MARTINEZ, M.D., F.A.C.S.

Otology and Otoneurology

8210 Walnut Hill Lane, Presbyterian Professional Building,
Suite 400, Dallas, Texas 75231; 214 691-7331

DALLAS HEARING, BALANCE AND OCULAR PULSE LABORATORY

Audiology—Vestibulometry—Non-invasive Carotid and Vertebral Circulation Studies

402 Presbyterian Professional Building, 8210 Walnut Hill Lane,
Dallas, Texas 75231; 214 691-7367

It's Time To Immunize!

Remind patients about needed immunizations.

Send them Reminder Cards.

Available free from TMA.

Write: TMA Communication Dept.
1801 North Lamar Blvd
Austin, Texas 78701

Pathology

FORT WORTH MEDICAL LABORATORIES
John J. Andujar, M.D.
Dorothy Patras, M.D.

1400 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

BROWN & ASSOCIATES MEDICAL LABORATORIES
Clinical Pathology, Hematology, Surgical Pathology, Exfoliative Cytology and Electrophoresis

Wilson G. Brown, M.D.
George V. Miller, M.D.
Walter G. Olin, Jr., M.D.
John R. Thomas, M.D.
S. Joseph Skinner, M.D.
Joe B. Haden, M.D.
Enrique van Santen, M.D.
Elaine V. Shalek, M.D.
Robert H. McNeely, M.D.
Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas 77030
220 Park Plaza Prof. Bldg., Houston, Texas 77004
Telephone 527-5230
Mailing Containers on Request—Office Pickup Service in Houston

PRUITT MEDICAL LABORATORIES
Jack Pruitt, M.D.
E. Hernandez, M.D.
Diplomates, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation
P. O. Box 160, Lufkin, Texas 75901, 634-4451

WACO CLINICAL PATHOLOGY LABORATORY
K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Robert Wayne Walter, M.D., F.A.C.P.
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation
Mailing Containers on Request
2112 Washington Ave., P.O. Box 3160, Waco, Texas 76707, 756-7226

J. S. Wilkenfeld, M.D., Medical Laboratories, Inc.
J. S. WILKENFELD, M.D. ENA E. MOCEGA, M.D.
Diplomates of the American Board of Pathology
Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology
8850 Long Point Road, P.O. Box 55008
Houston, Texas 77055, 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

ARTHUR L. RAINES, M.D. AND ASSOCIATES
Pathologists
DIPLOMATES, AMERICAN BOARD OF PATHOLOGY
Clinical Pathology — Surgical Pathology
Exfoliative Cytology — Medicolegal Consultation
Hospital and Clinic Laboratory Consultation
P. O. Box 118, Cleburne, Texas 76031
817 645-9181, Ext. 360
MAILING CONTAINERS ON REQUEST

HENRY B. OWENS, M.D., F.C.A.P.
Diplomate American Board of Pathology
Cytology and Tissue Pathology Only

801 E. Border St., Suite M. P. O. Box 1627
Arlington, Texas 76010, 817 461-2771

Mailing Containers on Request—Office Pickup Service in Arlington

Physical Medicine & Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES WARM SPRINGS FOUNDATION, INC.
P. O. BOX 58, GONZALES, TEXAS 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade
DAVID E. GUMPER, Administrator
LARRY E. BROWNE, M.D., Medical Director

ROBERTO G. ROLFINI, M.D.
Diplomate American Board of Physical Medicine & Rehabilitation
Rehabilitation Medicine and Electromyography

702 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205, Telephone 226-2424

SHOAL CREEK REHABILITATION CENTER
3501 Mills Avenue, Austin, Texas 78703, 512 452-0361
Rodney J. Simonsen, M.D., Medical Director
Joe T. Powell, M.D., Associate Director
Comprehensive rehabilitation facilities for spinal cord injury, stroke, head injury, pain management, and related conditions

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D., F.A.C.S.
THOMAS M. BIGGS, M.D., F.A.C.S.
LAURENCE E. WOLF, M.D.
Diplomates American Board of Plastic Surgery
PLASTIC SURGERY
5419 Caroline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.
Plastic, Maxillo-Facial and Hand Surgery

530 Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

JOHN B. PATTERSON, M.D., F.A.C.S.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Cosmetic Surgery

612 Doctors Bldg., Fort Worth, Texas 336-0356

PLASTIC SURGERY ASSOCIATES
Simon Fredricks, M.D., F.A.C.S.
Charles W. Bailey, Jr., M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery

Jonathan J. Dora, M.D.

1103 Medical Towers, Houston, Texas 77025, 523-5575

DAVID A. GRANT, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Plastic Surgery
Plastic & Reconstructive Surgery
Cosmetic Surgery

606 Medical Plaza Bldg., 800 Eighth Avenue, Fort Worth, Texas 76104, 335-4751

VALENTIN GRACIA, M.D., P.A., F.A.C.S., F.I.C.S., D.A.B.
Aesthetic Surgery—Burns

1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

PATRICK H. BECKHAM, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1111 West 34th Street, Suite 207, Austin, Texas 78705, 459-3258

TMA Automobile Lease Program
. . . Another service of your association

WILLIAM E. BARNES, M.D.
Diplomate American Board of Plastic Surgery
Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 608, Austin, Texas, 454-7659

JOHN E. CARTER, M.D., P.A.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery

7711 Louis Pasteur Drive, San Antonio, Texas 78229
Telephone: (Area Code 512) Office 696-2390 Medical Exchange 227-6331

JOSEPH C. FORD, M.D., P.A., F.A.C.S.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery

508 Madison Square Medical Building
311 Camden, San Antonio, Texas 78215, 224-5509

BROMLEY S. FREEMAN, M.D., F.A.C.S.
D. ROBERT WIEMER, M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery
Plastic & Reconstructive Surgery

7000 Fannin, Suite 1770, Houston, Texas 77025
713 795-5584

JACK L. CONLEE, M.D.
Diplomate American Board of Plastic Surgery
Plastic and Cosmetic Surgery

3318 S. Alameda, Suite 1, Corpus Christi, Texas, 855-7359

PLASTIC SURGERY ASSOCIATION
LEONARD KOCH, M.D.
Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410, 806 792-2313

ROBERT L. CLEMENT, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive Surgery

1111 West 34th Street, Suite 205, Austin, Texas 78705, 512 459-3101

STEPHEN C. LESAUVAGE, M.D.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1318 Clinic Drive, Tyler, Texas 75701; 214 593-8296

JOSEPH P. FLEMING, M.D., F.R.C.S.(C), F.A.C.S.
Plastic and Reconstructive Surgery

1213 Hermann Drive, Suite 645, Park Plaza Professional Building
Houston, Texas 77004; 713 524-7545

Texas Continuing Education Directory

. . . Another service of your association

Psychiatry

Perry C. Talkington, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Larry R. Kimsey, M.D.
Charles M. Smith, M.D.
Gregory G. Dimijian, M.D.
Linda R. Hughes, M.D.
Roy H. Fanoni, M.D.
Byron Howard, M.D.
Larrie W. Arnold, M.D.
Madeline W. Harford, M.D.
John G. Looney, M.D.

Practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

ALAN B. BRINSMADE, M.D.
General Psychiatry
Specializing in Psychotic Illnesses-Acute and Chronic

Hermann Medical Center Professional Building
Houston, Texas 77025, 713 524-8496

PERRY C. TALKINGTON, M.D.
Psychiatry

4645 Samuell Blvd., Dallas, Texas 75228, 214 381-3849

FABRE CLINIC

LOUIS F. FABRE, JR., M.D., Ph.D.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy
Children — Family — Alcoholism

Free of charge to patient MEDICATION CLINIC
FOR PATIENTS WITH ANXIETY OR DEPRESSION
IN CONJUNCTION WITH CNS RESEARCH WITH
PSYCHOPHARMACOLOGICAL COMPOUNDS

DAVID McLENDON, Ph.D.
Licensed Clinical Psychologist
Individual and Group Psychotherapy
Diagnostic Evaluations and Counseling

H. JOHN JACKSON, Ed.D.
Educational Psychologist
Administrative Consultation to School District
Program Organization Consultation
Individual Family Counseling

5503 Crawford Street, Houston, Texas 77004, 713 526-2328

"Every man owes some of his time to the upbuilding of his profession"

—Theodore Roosevelt

Take an active role in TMA and your county society.

HARRIS HAUSER, M.D. AND ASSOCIATES
Psychiatry

Frank H. Chesky, M.D.
Jose A. Gutierrez, M.D.
Harris M. Hauser, M.D.
Linda S. Blume, A.C.S.W.

7777 Southwest Freeway, Suite 1004, Houston, Texas 77074; 713 772-4600

1740 West 27th, Suite 315, Houston, Texas 77008; 713 772-4600

MEMORIAL NEUROLOGICAL ASSOCIATION
Neurology, Electroencephalography, Electromyography and C. T. Scan

James L. Frey, M.D.
Harris M. Hauser, M.D., F.A.A.N.
Cheor J. Kim, M.D.
Lorenzo Lorente, M.D.

1740 West 27th, Suite 315, Houston, Texas 77008, 713 861-4516
7777 Southwest Fwy., Suite 1004, Houston, Texas 77074, 713 772-4600

Psychiatry & Neurology

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., J. J. Leyva, M.D.

Department of Psychology
Allen Goss, Ph.D., Jim M. Phillips, Ph.D.
Practice Limited to Neurology and Psychiatry
Office Hours By Appointment
First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

STEPHEN WEISZ, M.D.
Practice Limited to Neurology and Psychiatry

1637 Medical Arts Bldg., Dallas, Texas 747-5183

THE FORT WORTH NEUROPSYCHIATRIC CENTER
•Herbert G. Rush, M.D.
A. Arauzo, M.D.
Sanford Lehrer, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

•Diplomate American Board of Psychiatry and Neurology

H. KORNBLIT, M.D.
Neurology—Headache Clinic

Memorial City Prof. Bldg. #176
902 Frostwood, Houston, Texas 77024

HAUSER CLINIC
Psychiatry, Neurology, Electroencephalography and Electromyography

Section of Psychiatry
•Abe Hauser, M.D.
•Robert I. Hauser, M.D.
•H. James Stuart, M.D.
Javier A. Zapata, M.D.
•Susan B. Darsey, M.D.
•Harvey A. Rosenstock, M.D.

Section of Psychology
Ken R. Vincent, Ed.D.

Administrator
Richard J. Kurzenberger

Section of Neurology
•Gerald Ratinov, M.D.
•Robert M. Gordon, M.D.
•Ronald DeVere, M.D.

Section of Social Work
Pamela Pilmmer, A.C.S.W.
Marguerite Papademitriou, A.C.S.W.
Margery Engel, M.S.S.W.
Jean Lerner, M.S.W.

808 Memorial Professional Building, Houston, Texas 77002
Telephone 713 224-5041

•Diplomate, American Board of Psychiatry and Neurology

TMA Action/TMA Legislative Bulletin
. . . Another service of your association

HAUSER PSYCHIATRIC ASSOCIATES
Psychiatry and Neurology
•Ronald J. Hauser, M.D., F.A.P.A.

Individual and Group Therapy
Marital and Family Counseling

Laurence J. Gross, M.S.W., S.P.
Judy Kanas, M.S.W., S.P.

•Diplomate, American Board of Psychiatry and Neurology

9100 Westheimer, Suite 40
Houston, Texas 77063; 781-6742

Radiology

ROYAL WERTZ, M.D., F.A.C.R.
Practice Limited to Radiology

800 Rusk Street, Amarillo, Texas 79106, 373-8324

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D., D.A.B.R.

RADIOLOGY
109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

KARL THORD DOCKRAY, M.D.
Diplomate, American Board of Nuclear Medicine
Diplomate, American Board of Radiology

Roentgenology, Nuclear Medicine, Xeromammography

763-5774 Office 765-7701 Page 762-0471 Mobile
Lubbock, Texas

Rheumatology

DON E. CHEATUM, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204, 823-4151

ROY M. FLEISCHMANN, M.D.
Diplomate American Board of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

3707 Gaston Avenue, Suite 810, Dallas, Texas 75246; 827-0868

Thoracic Surgery

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.
Maruf A. Razzuk, M.D.

DRS. PAULSON, URSCHEL, RAZZUK AND ASSOCIATES

Thoracic and Cardiovascular Surgery

1201 Barnett Tower
3600 Gaston Avenue, Dallas, Texas 75246; 824-2503

JOHN L. KEE, JR., M.D.

Thoracic Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246; 826-5184

ALLAN L. GRAHAM, M.D., F.A.C.S.
KARAMAT U. CHOUDHRY, M.D., F.A.C.S.

Diplomates American Board of Surgery and Board of Thoracic Surgery

ROBERT W. MILEY, M.D.

Diplomate American Board of Surgery

Cardiac, Thoracic and Vascular Surgery Associates

800 Eighth Ave., Suite 626, Fort Worth, Texas 76104: 332-7878

HECTOR O. YANES, M.D., P.A., F.A.C.S., F.A.C.C.

Cardiac, Vascular and Thoracic Surgery

Diplomate American Board of Surgery and
American Board of Thoracic Surgery

432 Medical Plaza, 800 Eighth Ave.,
Fort Worth, Texas 76104, 332-1947

RICHARD E. WOOD, M.D.

Cardiac, Thoracic and Vascular Surgery

Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890

Hours By Appointment

Hugh E. Wilson, M.D. and Associates

HUGH E. WILSON, M.D.
CHARLES T. MEADOWS, M.D.

Thoracic and Cardiovascular Surgery

6161 Harry Hines Boulevard
Dallas, Texas 75235; 214 637-3470

Urology

JO C. ALEXANDER, M.D., FOSTER FUQUA, M.D., ELGIN W. WARE, JR., M.D., GEORGE E. HURT, JR., M.D., DONALD E. JOHNSON, M.D. & ASSOCIATES
L. MICHAEL GOLDSTEIN, M.D., THOMAS P. REILLY, M.D.

Urology

3600 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109

Dolphus E. Compere, M.D., F.A.C.S.
Grant F. Begley, M.D., F.A.C.S.
Hugh Lamensdorf, M.D., F.A.C.S.

Diplomates of American Board of Urology

H. M. GIBSON, JR., M.D., F.A.C.S.
ABEL GARDUNO, M.D.

Certified by American Board of Urology

Practice Limited to Urology

512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephone 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
NEWTON F. McDONALD, M.D.
JAMES E. MORNEAU, M.D.

Practice Limited to Urology

1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

DONALD J. NEESE, M.D.

Diplomate of American Board of Urology

Practice Limited to Urology

570 Park Plaza Professional Building
1213 Hermann Drive, Houston, Texas 77030; 713 524-3931
400 Medical Center Blvd., Suite 207, Webster, Texas 77598; 713 332-2466

EUGENE R. TODD, M.D., P.A.

Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3434 Swiss Ave., Suite 406, Dallas, Tex. 75204, 214 826-3500

DALLAS UROLOGY ASSOCIATES

David D. Reisman, M.D.
Donald J. Logan, M.D.
Allen S. Plotkin, M.D.
Donald L. McKay, M.D.

Practice Limited to Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

JOSEPH D. MITCHELL, JR., M.D.
TROY W. SCOTT, M.D.

Urology

Barnett Tower, Suite 906, Baylor Medical Plaza,
3600 Gaston Avenue, Dallas, Texas 75246

PHYSICIAN

We are one of America's largest health care corporations. Currently we are seeking a back-up physician for our plasma donor center located in El Paso.

Responsibilities will include performing physicals in conjunction with donor screening and evaluations when our regular staff physicians are on vacation. Our requirements are flexible and we will consider retired physicians as well as those desiring to work on a consulting basis.

We offer excellent working environment and a highly competitive salary. Please contact: Tom Longnecker:

UNITED BIOLOGICS

A Division of

ABBOTT LABORATORIES
720 Texas Street
El Paso, Texas 79901
(915) 532-5322

Equal Opportunity Employer M/F

Classified Advertising

Physicians Wanted

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from the big city problems. Call collect Dr. David M. Pogue, at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIAN AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6383.

PSYCHIATRIST, board certified or eligible needed for modern forensic psychiatry program. Texas license required. Salary $34,000+. Immediate openings. Call or write: Robert B. Shelton, M.D., Superintendent, Rusk State Hospital, P. O. Box 318, Rusk, Texas 75785; 214-683-5481.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

EMERGENCY DEPARTMENT GROUP, HOUSTON AREA, EXPANDING—choice of salary or fee-for-service with guarantee—malpractice paid—Call 713-861-7942 or write Greater Houston Emergency Physicians Association, 625 West 19th, Houston, Texas 77008.

FAMILY PRACTICE—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas 512-672-2811.

FAMILY PRACTITIONER WANTED to join two established family practitioners in Trinity, Texas. Former partner is leaving November 1976 for residency. A large ready made practice is available now. You are invited to investigate clinic and hospital facility, compatibility, economic and environment of rural practice in an outstanding recreational area that includes 2,000,000 acres of East Texas forest, 90,000 acre Lake Livingston, various golf courses, marinas, and country club developments. All guarantees, etc. are negotiable. Bring your wife. Sam R. Barnes, M.D. and J. Richard Cook, M.D., P.O. Box 672, Trinity, Texas 75862.

GENERAL PRACTITIONER NEEDED: To work with general surgeon doing GP work. Excellent opportunity for a doctor desiring family practice work. May start with salary of $45,000 per year negotiable. City has population of 9,000 with trade area of 25,000 to 30,000. Contact Chris S. Cruzcosa, M.D., 300 S. 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

FAMILY PRACTICE, GENERAL PRACTICE—Wanted immediately to join physician staff in rural community one-hour from Dallas-Fort Worth area. Extremely active practice with good benefits and an opportunity to enter into the corporation. Practice is with physicians clinic, 26-bed hospital, and 42-bed nursing home within the same building complex. Excellent arrangement for family practice. For further information contact Roger E. Marks, M.D., 817-897-2215 or 817-897-4436; Glen Rose, Texas.

WANTED: FAMILY PRACTITIONER TO JOIN three man group. East Central Texas. New joint commission approved 30 bed hospital. Airport. New junior-senior high complex. Railroad division point. Small industry. Primary income ranching. Three fishing lakes. Deer, quail, dove hunting. Country club. No initial investment necessary. Contact Drs. Gage, Cox or Halbert, 315 Main Street, Teague, Texas 75860, 817-739-2561.

GENERAL INTERNIST AND FAMILY PRACTITIONER NEEDED to join nine man group in Clifton, Texas. Located in the heart of Texas, 30 miles NW of Waco; 15 miles from Lake Whitney. Good fishing; excellent hunting; new modern golf course. Excellent schools and churches in a growing progressive community and directly associated with a 75 bed, Hill Burton hospital which is fully accredited by the joint commission. Terms open at first with partnership in future. Please contact V. D. Goodall, M.D., Clifton Medical & Surgical Clinic Association, Clifton, Texas 76634. Telephone 817-675-8621 or 675-3113.

PUBLIC HEALTH DIRECTOR: The City of Austin, Texas, is accepting applications for the position of Director, Austin-Travis County Health Department. Full medical and administrative direction of local public health activities in a $4 million department of the City. Must be an MD with administrative experience; Texas license and MPH preferred. Salary starts at $35,000+, depending upon qualifications. Send resume to: Dan H. Davidson, City Manager, P.O. Box 1088, Austin, Texas 78767; 512-477-6511. Equal employment opportunity.

PHYSICIAN WANTED TO JOIN three-man group; two GP's, general surgeon (all Board). Practice in Hearne, Texas, population 5,000; drawing area 12,000+. Contact Dr. Ken Kennamer, Hearne, Texas; 713-279-3451 or 713-279-3100.

PHYSICIANS WANTED—Growing hospital in progressive East Texas town near metroplex needs ambitious physicians to join staff. Write Paul Bennet, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75647.

WANTED: Middle aged, perhaps older, well-trained and experienced internist or family practitioner. Light hours, easy responsibility backed by eight certified specialists staffing a very modern physician-controlled JCAH surgical and medical specialty hospital that adjoins offices. New 150 bed JCAH general hospital minutes away. Excellent southwestern climate; superior, unhurried lifestyle in wealthy 23,000 population city in center of large prosperous trade territory with two major medical centers immediately available. Above average earning potential. Guarantee negotiable with hospital furnishing office and complete ancillary services, both professional and business. This is for a competent man tired of the rat-race. He will practice better medicine for an appreciative clientele; his living conditions will be improved and less costly than in a large city. He will be only three or four minutes from work, shopping centers, golf course or airport. Hence an opportunity worth exploration. Contact E. O. Nichols, Jr., M.D., E. O. Nichols Hospital, Inc., Plainview, Texas 79072; 806-296-7425.

PHYSICIANS: You can find the perfect practice opportunity through Medenco Hospitals, Inc. A variety of settings from rural to metropolitan plus an attractive financial package are available with Medenco. Contact: Physician Relations, Medenco Hospitals, Inc., P. O. Box 3448, Houston, Texas 77001; toll free in Texas 800-392-6467.

INDUSTRIAL PHYSICIAN TO JOIN multispecialty group as an addition to a large industrial department. Some surgical training desired; family practice boards acceptable. Work consists of pre-employment physicals, industrial injuries, and family practice. Salary and partnership negotiable and competitive. Keogh plan available. Adequate time off. Modern clinic facilities. Growing town of 125,000. Send curriculum vitae and references to Harry Ledbetter, M.D., 1518 Tenth Street, Wichita Falls, Texas 76301.

PATHOLOGIST—AP&CP CERTIFIED with two to three years experience to join pathologists' group in private practice in Houston, Texas. Special interest in bacteriology and clinical chemistry. Send curriculum vitae and recent photograph to Ad-717, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED—GENERAL SURGEON to join established surgical practice in small city in the East Texas area. Send curriculum vitae to Athens Surgical Clinic, P. O. Box 1490, Athens, Texas 75751; telephone 214-675-5781.

TEXAS, NORTHEAST: Emergency physicians. Immediate openings available in established ACEP oriented group. Positions in several communities available. Prefer career-oriented emergency MDs. Additional training and/or experience required. Flexible schedule, fee-for-service with guarantee and usual fringes including malpractice insurance. Write: Emergency Medicine Consultants, 3600 Gaston Avenue, Dallas, Texas 75246, or call 214-823-6850.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $10.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

OB/GYN man to join multi-specialty group of six. Salary first year $40,000 with a bonus of $5,000. We will take either an OB/GYN man or a family practitioner willing to do some obstetrics and gynecology. Please reply to Ad-720, *Texas Medicine*, 1801 North Lamar Blvd., Austin Texas 78701.

INTERNIST WANTED to join multispecialty group in Texas. Please give pertinent information and telephone number with first letter. Salary open, possibly $45,000 to $50,000. Please reply to Ad-721, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON: American graduate, preferably just out of residency to do all major surgery for well established clinic. Please reply to Ad-722, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTITIONER, before you decide on a location to practice, invest five minutes of your time in a collect call to: Gerald Moore, Lynn County Hospital District, Tahoka, Texas; 806-998-4533.

HOUSTON EMERGENCY PHYSICIANS ASSOCIATES has immediate openings for career oriented emergency physicians with surgical or emergency medicine backgrounds. Continuing education required. Teaching and non-teaching positions available in the city limits of Houston, Texas. Our physicians' present salaries are between $50,000 and $80,000 per annum based on tenure and experience. Flexible scheduling to allow for vacations and continuing education. Benefits include malpractice insurance, major medical, life, disability income. Call or send CV: Houston Emergency Physicians Associates, P. O. Box 36949, Houston, Texas 77036; 713-776-1081.

PRIMARY CARE POSITIONS available immediately. Assistance with travel, office overhead, and salaries or guarantees negotiable. For details send CV and preferences to Ad-725, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

NEED FULL TIME PHYSICIAN at medical facility of Gary Job Corps Center in resort community of San Marcos, Texas. Involvement is 8 a.m. to 5 p.m., Monday through Friday and on call alternate nights and weekends. Fringe benefits include a desirable housing arrangement and prepaid malpractice insurance. Salary upper $30s and negotiable. Contact Dr. M. D. Heatly, 512-396-6570 or at night 392-3044; or Mr. Al Martinez, Hospital Administrator, 396-6422; or write P.O. Box 645, San Marcos, Texas 78666.

NEEDED: PHYSICIANS to practice at Mexia State School, located in Central Texas just 30 minutes east of Waco. Many fringe benefits: retirement, sick leave, vacation, 40-hour week, group insurance. Salary range $34,300 to $38,300 depending on qualifications. An equal opportunity employer. Contact Medical Director, Mexia State School, P. O. Box 1132, Mexia, Texas 76667. 817-562-2821.

GENERAL PRACTITIONER NEEDED to join a group of 4 active GPs. Large suburban area. Open staff hospitals. Recreational and educational facilities available. Salary open. Robert E. Chapman, M.D., Fort Worth, Texas 76117; 817-834-8101.

NEUROLOGIST needed to begin neuropsychiatric group practice in Southwest Houston. Salary plus percentage. Position available beginning July 1. Send curriculum vitae to 902 Frostwood, Suite 104, Houston, Texas 77024; 713-467-2772.

VIGOROUS, PROGRESSIVE, ESTABLISHED multispecialty group. West Texas Medical Associates invites qualified internists, general surgeons, orthopedists, urologists, anesthesiologists, pediatricians to practice in San Angelo, Texas, a university community. Telephone: Administrator, 915-655-5761, ext. 211.

FAMILY PRACTICE opportunity in an attractive east Dallas suburban community of 7,000 people. This is an active practice in a community where you will be appreciated. Financial assistance and office space is available. A new 100-bed general hospital is 10 minutes away. Send detailed CV to Ad-726, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

CARDIOTHORACIC FELLOWSHIP AVAILABLE: Six month to one year balanced program with experience in adult cardiac, pulmonary, esophageal and vascular surgery. Large Southwest medical center, academic affiliation. Please reply to Ad-728, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

UROLOGIST WANTED TO JOIN 15 man multispecialty group in El Paso, Texas. Full partnership after one year. Five weeks vacation, retirement, health plans. Malpractice paid. Call 915-592-0201, R. D. Bobbitt, M.D., ext. 1680.

2ND ORTHOPEDIST TO JOIN 15 man multispecialty group with growing need, $6,000 monthly, benefits. Malpractice paid. Call 915-592-0201, R. D. Bobbitt, M.D., ext. 1680.

EMERGENCY PHYSICIANS $60,000. El Paso, Texas. Texas-Sun City. Two year old hospital and clinic, growing side of town. Malpractice paid, benefits. Call 915-592-0201.

WANTED: ACTIVE OR RETIRED CARDIOLOGIST to associate with company engaged in non-invasive cardiovascular diagnostics—Holter 24 hour EKG scanning and echocardiography. Professional may work from his own home or office. Contact: Keith Megeff, 2708 Southwest Freeway, Suite 23, Houston, Texas 77098.

DALLAS COUNTY POSITION OPEN, PUBLIC HEALTH SERVICE'S EXECUTIVE DIRECTOR. Must be a licensed physician or qualified to be licensed to practice in State of Texas. Minimum of five year's progressive administrative experience, three of which must have been in a combined health services environment. Will be promoting consolidation of existing public health services in Dallas County. Must have ability to resolve problems through negotiation with intergovernmental agencies. Salary commensurate with experience. Send resume to Mr. Herbert D. Shaver, Personnel/Civil Service Director, 103 Criminal Courts Building, Dallas, Texas 75202 or call 214-749-8637 for detailed job information. Applications will not be considered after September 30, 1977. Dallas County is an equal opportunity employer.

STUDENT HEALTH SERVICE—Beautiful campus, competitive salary and benefits, East Texas recreational area. New clinic in planning. Contact Capt. A. C. Harris, USN (Ret.), Box 3058 SFA, Nacogdoches, Texas 75962; 713-569-4008.

EMERGENCY MEDICINE, DALLAS AREA: Immediate opening for full time, experienced emergency room ER physician. Flexible shifts. Competitive remuneration. Contact Dr. R. Murchison, 6350 LBJ Freeway, Suite 282, Dallas, Texas 75240; 415-472-0130 or 214-233-9088.

THE HILLS OF HOME IS THE TITLE OF A BEAUTIFUL Scottish song. It is especially applicable to East Texas. Are you tired of traffic congestion, high overhead, hassles with office personnel, high crime rates? Do you long to own a farm or ranch of your own where you can enjoy nature? If so, write us as we are taking application from licensed physicians and psychiatrists. Our hospital is modern, JCAH approved, and program oriented. Salaries: Physicians, $32,800-35,800, depending on qualifications; Psychiatrists, $35,800-43,800, depending on qualifications. Housing available on the grounds. Contact Rusk State Hospital, Box 318, Rusk, Texas 75785; Dave Everly, 214-683-3411. An equal opportunity employer.

OPHTHALMOLOGIST TO JOIN 15 man multispecialty group. Five weeks vacation, retirement, malpractice paid. El Paso, Texas. Call 915-592-0201, ext. 1680.

TEXAS PRACTICES. Economic and professional climate excellent. Have requests from physicians in Texas communities for additional physicians, usually in the same field. City suburbs, small and medium size towns. Attractive financial guarantees. No fee to physician candidate. Please write with C.V. and preferences to Sanford Smith, Professional Practice Management, Inc., 1102 Kingwood Drive, Humble, Texas 77339.

LOCUM TENENS WANTED. 3-6 months. Start immediately. To assist three other doctors in industrial clinic. No nights or weekends. Prefer young graduate. Malpractice paid. $3,500 month. Contact: Drs. Frierson, Wolf or Frnka, 2403 Caroline, Houston, Texas 77004.

DIRECTOR OF PUBLIC HEALTH, WACO, TEXAS. Exciting mix of administrative and clinical responsibilities in a dynamic City-County Health Department with a staff of 70 employees. Position requires ability to supervise and direct a program involving direct health services, epidemiological investigations, health education and consultation to the medical profession in the fields of communicable diseases and community health problems. Reports to the City Manager. The City of Waco is a city of 100,000 with big city advantages without their problems. Fine shopping centers and excellent cultural and recreational facilities. Salary is open with exceptional fringe benefits. Must be graduate of accredited school of medicine, preferably supplemented by Masters degree in public health with several years experience in community health activities. Send resume to: Director of Personnel, City of Waco, P.O. Box 1370, Waco, Texas 76703. An equal opportunity employer.

NEEDED: TWO FAMILY PRACTITIONERS, 40 bed hospital with hospital owned clinic, both fully equipped. Present active staff of two physicians. Financial arrangements negotiable with aggressive board of directors, unlimited growth. Caprock Hospital District, 901 West Crockett Street, Floydada, Texas 79235. Phone 806-983-2875, collect.

IMMEDIATE OPENINGS IN SURGERY AND GENERAL PRACTICE. Family Diagnostic Medical Center is in Hillsboro, Texas, population 10,000, trade area of 25,000. Hillsboro is growing town, close to hunting and fishing areas. Adequate time off and hospital has weekend emergency room physician group. First year negotiable and partnership possible at end of one year. Call collect James M. Buie, M.D., 817-582-3401.

TEXAS, NORTH CENTRAL. Emergency physicians needed August 1, 1977 to complete full-time group in a 177-bed hospital. Excellent staff back-up. Small town near Dallas. Numerous recreational opportunities nearby. Call Kalman Shwarts, M.D., 214-872-5011 or 214-874-5611, ext. 300.

Situations Wanted

SEEKING LOCATION: 31 year old, US trained general surgeon, will be board eligible July 1977. Experienced in endoscopy. Prefer medium to small community. Available July 1977. 504-455-7499, or write Ad-694, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST: 47 year old, board certified, AP-CP, native Texan. Presently lab director at 250 bed hospital. Desire to return to south or southwest. Excellent relationship with hospital administration and medical staff. References. Will furnish aggressive pathology service for progressive administration and medical staff. Please reply to Ad-713, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

MD—Graduate Ohio State University. Training and experience general medicine, allergy. Board certified anesthesiology. Interest is general adult medical practice with emphasis on pain problems. Solo or association. Prefer suburb of Dallas, Fort Worth, Austin, San Antonio, Houston or Corpus Christi. Please reply to Ad-716, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GROUP PRACTICE: Experienced physician. Dallas or Houston. Available September/October 1977. Please reply to Ad-723, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST: Board certified in AP & CP, now associate pathologist in New York state hospital. Seeks position in hospital or laboratory in Texas. Licensed in New York (FLEX). Please reply to Saramma John, M.D., Laboratory, Central Islip State Hospital, Central Islip, New York 11722.

SEEKING LOCATION: 31 year old board certified otolaryngologist. Presently serving military obligation which will be completed July 1978. Trained in general ENT, head and neck oncology, otology and facial plastics. Contact Bruce Meyers, M.D., 1017-B Drennan Park, Fort Campbell, Kentucky 42223.

DIAGNOSTIC RADIOLOGIST AVAILABLE January 1978. Will have completed University of Tennessee residency program including training in angiography, ultrasound and C.T. Seek practice opportunity in Central Texas. Write or call William Healy, M.D., 145 S. Greer, Memphis, Tennessee 38111. Phone 901-323-3737.

GENERAL SURGEON with interest in general practice would like to relocate, large and medium size cities are preferred, small cities may also be considered. Association or solo. Please reply to Ad-730, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST, BOARD ELIGIBLE, wife board eligible OB-GYN. Both well trained in USA. Desire suitable placement in Texas—solo, group practice, clinic or hospital based practice. Expect to get Texas license in June 1977. Dr. Suresh Shah, 6365 Eastondale, Mayfield Heights, Ohio 44124. Telephone 216-461-9738.

FAMILY PRACTICE: Board certified anesthesiologist (Belgium) with considerable experience emergency medicine and Ob-Gyn wishes return to general practice in small town within easy access Austin or San Antonio. Available October. Perfect English; wife American. Please reply to Ad-727, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ANESTHESIOLOGIST, 33, board eligible, FLEX, university trained. Experienced in open heart, ICU, neuroanesthesia and acute respiratory emergencies. Prefers solo or group practice. Available August 1977. Please reply to Ad-732, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FEMALE GYNECOLOGIST. American board. FRCS (Canada) by exam certified by American Society of Cytology. Extensive experience in all aspects of Ob-Gyn and cytology, clinical as well as teaching. Would like to relocate in medium size city, private practice or teaching institution. Please reply to Ad-729, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

CARDIOLOGIST, ABIM, age 30 and completing cardiology fellowship 6/78. Trained in non-invasive (echo, phono, stress testing) and invasive (R and L heart, coronary, Swan-Ganz, pacemakers) techniques. Seeking cardiology group practice or mixed group. Ralph D. Millsaps, M.D., 6902 Williams, Galveston, Texas 77551.

GENERAL SURGEON, 37, board eligible, FRCS (Eng & Ed), FLEX, experience in vascular and pediatric surgery. Excellent training. Academic background including Harvard. Excellent references. Seeks practice opportunity—solo, group, partnership or institutional. Available January 1978. Contact I.N. Nayak, M.D., St. Barnabas Medical Center, Livingston, New Jersey 07039. 201-533-5252 or 201-731-7179 evenings.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

GROWING NORTHEAST SAN ANTONIO, 55,000 population. No MDs. Five examining rooms, reception, large personal office, carpeted, air conditioned. Rent free details contact W. H. Gibson, 512-656-1166, night 512-651-6449.

FURNISHED OFFICE FOR RENT: equipment for sale going concern. Fashionable area, North Dallas. Full adjoining lab facilities if wanted. Owner left town. Please reply to Ad-724, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

X-RAY, (no fluoroscopy) and clinical laboratory facilities. Available for sale in fastest growing 1960FM area, Houston, Northwest suburb. Net income in excess of $25,000 in one year. Can sell one or combined. Please reply to Ad-714, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

AUSTIN—NEW PROFESSIONAL PARK. Int. Med., GP, FP, Peds, OB/GYN, ENT, Radiologist to associate in group setting for solo practice. University town, new hospital. Cannon Professional Park, 1110 William Cannon Drive, Austin, Texas 78745. Telephone 512-451-8484 or 512-444-1954.

DOCTORS WANTED: Physicians to serve North Austin and Round Rock. Will build to suit in prime location at Peyton Gin Shopping Center across from Lanier High School. Locate your office in a rapidly growing population center and at the same time reduce your exorbitant office rent. Phone 836-5472 or 345-1670 or write Cleto Elequin, M.D., 942 Peyton Gin, Austin, Texas 78753.

MD's OFFICE OF 1,000 square feet with lab, two bathrooms, two treatment rooms, private office and business office. Very reasonable rent in Oak City Center, Austin. Call 512-459-0286 daytime or 512-756-6657 after 5 p.m. Dr. J. E. Cummins, 410 South Water, Burnet, Texas 78611.

DALLAS—Beautifully decorated medical office suite. Prime location in Preston Center, 6033 Sherry Lane. Carpeted, free parking. Approximately 1700 sq. ft. 214-363-1689 or 214-361-1200.

FOR SALE: Practice internal medicine. Houston, Texas. Professional building, next to hospital. Retiring from practice. Write Ad-731, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

DREXEL MAHOGANY TRAVIS COURT dining table, three leaves. Two host, four side chairs. Credenza. Server, drop leaves, two drawers. $1,100. By appointment, please. Houston, 713-668-9330, Mrs. E. Allen Sherrill.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

WATCH FOR DETAILS!
TMA Conference on Medical Service
Sept. 10, 1977 Austin

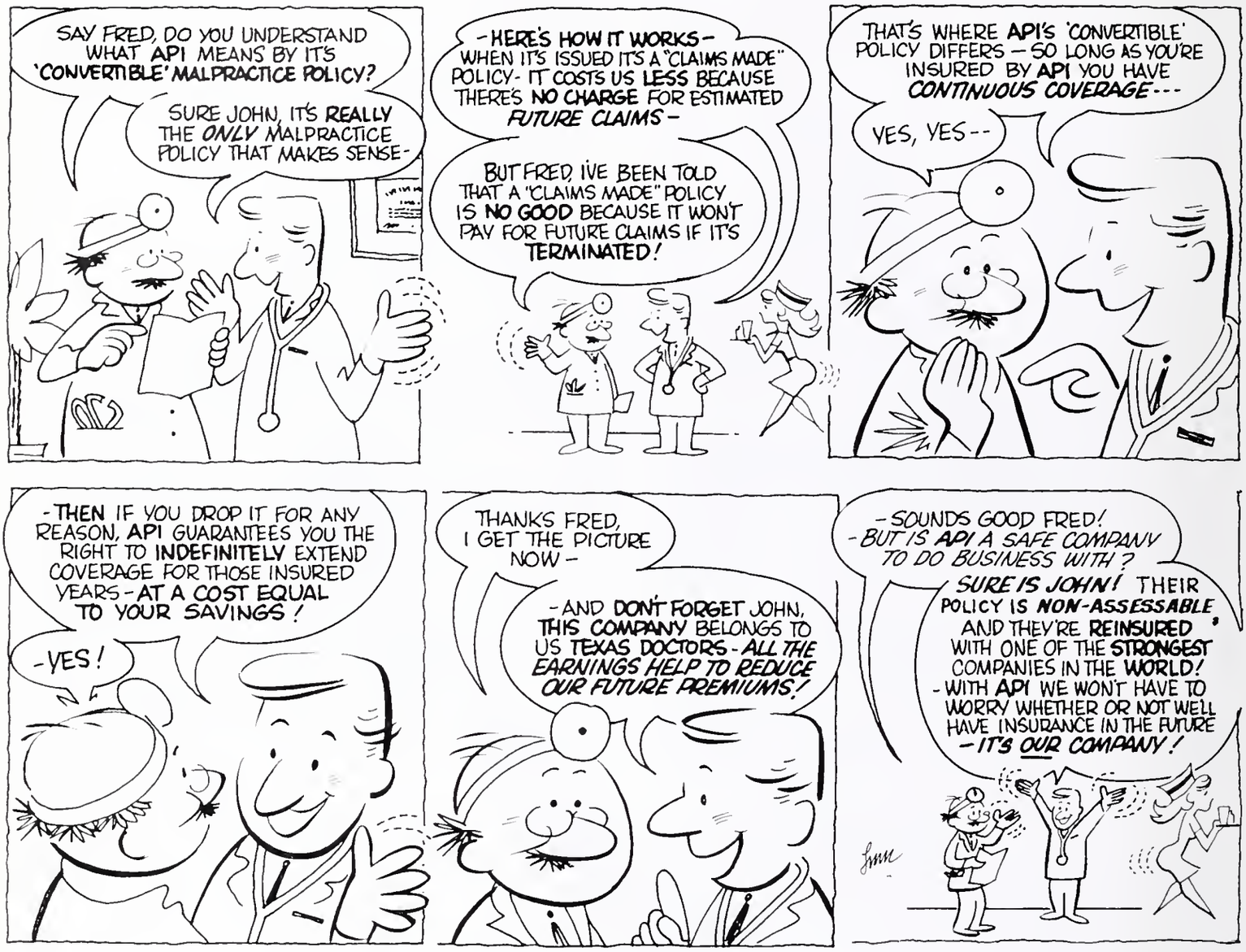
Advertising Directory

American Physicians Insurance Exchange	132
Beverly Hills Hospital	64
Blue Cross-Blue Shield of Texas	12
Burroughs Wellcome	65-67
Comatic Laboratories	3rd Cover
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
Emergency Medicine Symposium, San Antonio	58
Flint Laboratories	17-18
Gentec Hospital Supply Company	106
Insurance Corporation of America	34-37
Ives Laboratories	5
Mead Johnson Laboratories	30
Kelsey-Seybold Clinic	73
Eli Lilly and Company	42
Medical Arts Clinic of Corsicana	118
The Medical Protective Company	73
Park North General Hospital	29
Parke Davis & Company	4
Pennwalt Corp.	102-103
Pharmaceutical Manufacturers Association	68-69
The Prudential Insurance Company of America	9
Roche Laboratories	1, 2, 94-95, 104
Roerig & Co.	93
Scott and White Clinic	Back Cover
Smith Kline & French	96
Starlite Village Hospital	64
Texas Bank and Trust Company	29
Texas Medical Association	
Automobile Leasing Program	101
Conference on Medical Service	58
The Great Getaway-Nassau	22
Memorial Library Fund	114
Texas Continuing Education Directory for Physicians	33
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchings, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	118
United Biologics, Division of Abbott Laboratories	128
Warner-Chilcott Laboratories	28-29
Wichita Falls Clinic	64
Physicians' Directory	119-128
Classified Advertising	129-131

Publication of an advertisement in *Texas Medicine* is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

MALPRACTICE INSURANCE ...

... API's CONVERTIBLE, NON-ASSESSABLE POLICY IS THE BEST!


SAY FRED, DO YOU UNDERSTAND WHAT API MEANS BY IT'S 'CONVERTIBLE' MALPRACTICE POLICY?
SURE JOHN, IT'S REALLY THE ONLY MALPRACTICE POLICY THAT MAKES SENSE-
-HERE'S HOW IT WORKS- WHEN IT'S ISSUED IT'S A "CLAIMS MADE" POLICY- IT COSTS US LESS BECAUSE THERE'S NO CHARGE FOR ESTIMATED FUTURE CLAIMS-
BUT FRED, I'VE BEEN TOLD THAT A "CLAIMS MADE" POLICY IS NO GOOD BECAUSE IT WON'T PAY FOR FUTURE CLAIMS IF IT'S TERMINATED!
THAT'S WHERE API'S 'CONVERTIBLE' POLICY DIFFERS — SO LONG AS YOU'RE INSURED BY API YOU HAVE CONTINUOUS COVERAGE---
YES, YES--
-THEN IF YOU DROP IT FOR ANY REASON, API GUARANTEES YOU THE RIGHT TO INDEFINITELY EXTEND COVERAGE FOR THOSE INSURED YEARS - AT A COST EQUAL TO YOUR SAVINGS!
-YES!
THANKS FRED, I GET THE PICTURE NOW -
-AND DON'T FORGET JOHN, THIS COMPANY BELONGS TO US TEXAS DOCTORS - ALL THE EARNINGS HELP TO REDUCE OUR FUTURE PREMIUMS!
-SOUNDS GOOD FRED! -BUT IS API A SAFE COMPANY TO DO BUSINESS WITH?
SURE IS JOHN! THEIR POLICY IS NON-ASSESSABLE, AND THEY'RE REINSURED WITH ONE OF THE STRONGEST COMPANIES IN THE WORLD! - WITH API WE WON'T HAVE TO WORRY WHETHER OR NOT WE'LL HAVE INSURANCE IN THE FUTURE -IT'S OUR COMPANY!

And that's not all. You'll have the advantage of a peer review group to screen out claim-prone applicants and provide claim review with defendant doctor and attorney. You'll get legal representation by a nationally recognized law firm with a history of successful, tough defense of malpractice suits.

API has grown to $1,000,000 in policyholders surplus — net worth.

Doctor, find out how to join your colleagues who have learned the way out of the professional liability dilemma. Call or write today!

AMERICAN PHYSICIANS INSURANCE EXCHANGE

1400 FRITO-LAY TOWER • DALLAS, TEXAS 75235 • PHONE: (214) 350-6661

API is reinsured by one of America's largest reinsurance groups — rated A+XV by A.M. Best. (The highest rating available).

Letters

Open Letter to John M. Smith, Jr, MD, President, Texas Medical Association

Dear John:

I congratulate you on your election to the presidency of the Texas Medical Association and wish for you all the luck you deserve and will need!

My first thought was to send this letter to your office, but I changed my mind and will forward it to the editor of *Texas Medicine* as an "open letter" to you. (The editor may or may not run it!)

The news coverage indicates that you plan to deal with "interrelated medical education and doctor distribution problems—develop a model health care delivery system—full funding for existing medical schools . . ." All are admirable objectives, and I commend you.

Some of these projects get my attention in a hurry; one is the utopian idea of "better doctor distribution." Those who hope to see a highly qualified doctor in every community are living in the past, we will never return to this type of health care.

The schools are training young doctors to work in teams and to use the latest complete ancillary equipment along with highly trained paramedical personnel. They will continue to practice that type of medicine in preference to the "house calls with stethoscope" variety.

Genetically, I can find no straight line to Solomon's wisdom and to my knowledge no one has expressed an opinion that I am clairvoyant. I do, however, want to offer you two projects for your year in office. If you can succeed in getting these two things in motion—not flying—your name will go down indelibly in Texas' medical history.

First, access to medical care now is measured in time rather than distance, and the pattern of care must be changed also. In the immediate future, I predict that rural settlements will be served initially by a "paramedic" who can handle much of the routine care and minor treatment, but will call on "EMS" or "MAST" units to rush seriously ill or injured patients to well-equipped and well-staffed hospitals in the nearest metropolitan centers.

The day of the highly trained doctor voluntarily practicing in small communities is gone; therefore, why don't you lead the movement to get these trained and "specialized" paramedics into the rural areas?

The next project has to do with the medical schools. Several years ago our medical schools played right into the laps of the bureaucrats by accepting federal aid. They are now finding out about the old cliche, " With dole comes control." Washington pooh-bahs are now telling the leaders of our schools that they "must" do a great many undesirable things in connection with their curriculums, admission requirements, and so forth. Some of these rules will degrade the high quality of training now prevalent in our medical schools.

I suggest that you lead a movement to convince the governor, the legislature, and the medical school hierarchies that there is still time to wean themselves from the bureaucratic teats. "Going along" with federal government will get you nowhere.

Wm. M. Center, MD, San Antonio.

Insect Sting Data Requested

Dear Ms Baker:

I am convinced that lives now needlessly lost because of severe systemic reactions to insect stings could be saved. How? By a greater awareness of the possibility of such fatal reactions, plus knowledge that an insect sting kit exists. The kit is an emergency first aid measure to stave off anaphylaxis. Because of my convictions I am presently collecting and correlating data on the incidence of such fatalities.

I am especially interested in time lapse between sting and death although information concerning the following would be helpful: (1) time sequence of symptoms, (2) previous reactions to insect stings, (3) medication on hand at time of sting, (4) type of medication, (5) type of insect, (6) number of stings, and (7) estimation as to whether or not a physician or hospital emergency room could have been reached in time to avoid a fatal outcome.

Claude A. Frazier, MD
4-C Doctors Park
Asheville, NC 28801

Letters to the Editor are welcome for consideration in this column. The Board of Publication and the editors reserve the right to excerpt letters in accordance with available space and editorial judgment as recommended by consultants. Neither the editors nor TMA shall be, in any manner or to any extent, directly or indirectly, responsible for views expressed by authors in this column.

Editorials

ORGANIZED MEDICINE'S VIEWPOINT ON COST CONTAINMENT AND PLANNING

The American people generally are impatient; they have come to expect that increased appropriations and increased activity on the part of scientists should bring about immediate solutions to problems. Social problems, however, do not respond as quickly as our favorite television programs would lead us to believe.

Improvements do come about, even though they are not always recognized by the public. For example, in 1931, low-income people averaged 2.2 physician visits per year; by 1975, they averaged six visits per year. By comparison, the high income individual had 4.3 visits per year in 1931 and 4.9 in 1975. For all citizens, the number of visits per year rose from 2.6 in 1931 to 5.1 in 1975. While access still is a problem in some areas, health care services certainly are more equitably distributed than they were 40 years ago, and the effects of this increased access are reflected in the reductions in both mortality and morbidity statistics.

But these advances in access and quality have not come without increased costs which involve seven key factors: (1) general inflation; (2) price controls; (3) access and public demand; (4) defensive medicine; (5) improved technology; (6) duplication of services; and (7) health habits and control of excess. Neither physicians nor health planners can significantly affect all of these factors, but we can have an impact in some areas.

General inflation has had its impact on the price of health care services and all other products, and physicians cannot directly affect rising prices for wages, rent, utilities, and other business necessities. While the practice of medicine is not a business, it has its business side, and physicians are becoming increasingly sensitive to the need to improve the productivity and efficiency of their offices. TMA is currently sponsoring a series of workshops for physicians to assist them in this area.

During 1970-1976, the consumer price index increased by 48%, yet during that same period physicians were allowed only a 27% increase in the reimbursement from federal programs such as Medicare and Medicaid. To compensate, physicians raised their fees for private patients, resulting in a direct subsidy of the public programs by the private patient and his or her employer through increased insurance premiums.

The medical care industry is still feeling the effects of the Economic Stabilization Program of the previous administration. When price controls were finally lifted, there was a massive realignment of health care prices to reestablish normal levels in a competitive economy. I predict that the proposal to limit increases in hospital revenue likewise will increase costs, since many hospitals already are raising charges in anticipation of such a plan. If such a plan is implemented, either services will be curtailed (raising per unit cost) or we will see another explosion in prices when the freeze is over. More effective ways must be found to control costs and encourage savings.

Insurance now pays nine out of ten hospital bills and 65% of physician care expenses. For every other purchase, the consumer uses his own earnings, savings or credit, but for medical care, the consumer generally does not spend his own money. Patients feel that the programs are free, and in the absence of some copayment, they make demands for our services over and above what has ever been customary. We must sensitize the public that they ultimately pay for these services and must share the responsibility

for utilizing the most appropriate services, and only when they are necessary.

Increased malpractice insurance premiums have led to the practice of defensive medicine. For example, my premium ten years ago was $154, but for the past three years it has been over $11,000 per year. The public must be educated to realize that a bad result is not necessarily negligence—then physicians can proceed to practice medicine according to the actual needs of the patient rather than the possible needs of a court.

Not all price increases are necessarily bad; some reflect improved service and are certainly justifiable. Although new technology is expensive, it often benefits patients, and limiting technological advance by restricting its availability and use will result in needless loss of life. It is said that one-third of what we know in medicine today will be obsolete in five years—if we only knew which third, planning for the future would be a lot easier and probably less expensive. But medical science is inexact, and trying to channel it neatly into rational and economically determined patterns is frustrating and doesn't work very well.

There is no doubt that duplication of services and facilities does exist, but under the leadership of expert medical guidance at the hospital staff and local planning level, these duplications can be kept to a minimum. Regionalization of services is sensible to an extent, but it can also increase the patient's costs in some instances. In addition, physicians and health planners must influence insurance carriers to allow for payment of laboratory work on an outpatient basis before surgery, rather than having to admit the patient one or even *two* days earlier. Physicians and patients must communicate better so that tests are not duplicated. Medical students must be educated as to cost of medical care.

Finally, health care costs are influenced by the personal health habits of the individual. Most people know that tobacco, alcohol, overeating, and underexercising are not good for them, to say nothing of abusing drugs and "burning the candle at both ends" in frantic attempts to do *everything* and do it well. Nevertheless, individuals choose to continue these habits that literally can cost them health, life, and fortune, and no medical system is going to change that fact.

What is the medical profession doing to control cost and increase access to medical care?

The Texas Medical Association is firmly on record as condemning any form of impropriety or illegality in dealing with government health programs, supporting discipline and peer review mechanisms, and the strengthening of these systems.

In the recent session of the Texas Legislature, we supported further strengthening of the disciplinary powers of the State Board of Medical Examiners.

Another area of our activity is to try to provide adequate numbers of physicians for our state. We have lobbied and fought for the establishment of four new medical schools since the 1950s. The output of physicians will increase to 1,000 per year by 1981—up from 321 in 1968. Since the 1950s, we have been urging the Legislature and the medical schools to support the training of more family practice physicians. This year, for the first time, we have been successful in getting legislative support for more family practice residencies.

We are urging physicians to stress ambulatory care in lieu of hospital care, to prescribe lower cost drugs where therapeutic equivalents exist, and to order only laboratory work essential to the patient's problem.

While we urge them to contain fees, we recognize that many physicians have had to add office staff to cope with the paperwork, and an unbelievable amount of the physician's time is spent on this paperwork instead of caring for patients.

The hard fact is that medical care costs have to be considered along with the accessibility of medical care to the whole population and the quality of the care given.

Medical insurance—and especially government medical insurance—has vastly widened access, and this emphasis on access, widely ac-

THE LIBRARY

cepted as a desirable social goal, has resulted in the impact falling on cost and quality. Since there has been no compromise in quality, the entire burden shifts to cost.

The policy question is really this: Which way does the American public want its medical care? There are three basic choices:

1. We can have lower costs and universal access if we are willing to limit quality.
2. We can have lower cost and the present high quality if we are willing to limit access by shifting more of the financial burden back on the individual.
3. We can provide universal access and the present high quality if we are willing to accept the high cost.

The third choice is mine, and it also appears to be the opinion chosen by most Americans.

John M. Smith, Jr, MD, San Antonio,
President, Texas Medical Association.

PLANNING FOR MEDICAL DISASTER IS KEY TO EFFECTIVE RESPONSE

Dr Charles R. Queen's account of the Tenerife airport disaster (pages 87-92) underscores the importance of medical personnel trained in the management of mass casualties.

In any hospital, the sudden influx of a large number of casualties with critical injuries requires a prompt, planned response by the medical community; otherwise, the result is confusion and further suffering.

Industrial explosions, fires, transportation accidents involving spillages of hazardous materials, as well as natural disasters occur not uncommonly in Texas. Because of the medical and health planning that has taken place in the state, it is more or less routine now for local teams to handle such events entirely, or to contain the situation until outside assistance can be provided. Recent events include explosions at Eagle Pass, with multiple casualties stabilized at the scene of the disaster and then airlifted by helicopter to major trauma centers, and a tornado at Monahans unique in that its casualties were handled entirely by the community.

In Texas, medical and health disaster preparedness is the joint responsibility of the Emergency Medical Services Division, Texas Department of Health Resources, and the TMA Committee on Disaster Medical Care. There are 29 trauma centers in Texas that serve as focal points for mass casualty management. They can operate alone to meet the needs of the community, or be coordinated over several counties or throughout the state. In most Texas communities, physicians interested and skilled in management of the medical aspects of disasters such as the one at Tenerife, and often with wartime medical experience, are known to local authorities and work with them quite successfully.

Existing medical disaster management teams are living things requiring nourishment in the form of either real disasters or disaster exercises. Otherwise interest fades and ultimately so does the organization.

Accordingly, a principal function of the Texas Medical Association's Committee on Disaster Medical Care is to assist physicians who are interested in disaster preparedness for their communities. There are 156 medical doctors now active in the organization that is sanctioned both by the TMA and state law, but as many doctors as possible must be familiar with this system because of the geographic extent of Texas.

Dr Queen's article must remind us again that a viable disaster medical team in a community is the key to the survival of the greatest number possible in the community when its hospital is suddenly flooded with critically injured patients.

For these reasons, I invite physicians who are interested in their communities' disaster preparedness to contact me, or to write or phone Mr Charles E. King, Director of Emergency Medical Services Division, Texas Department of Health Resources, 1100 West 49th Street, Austin, TX 78756, telephone (512) 458-7551.

Frank M. Townsend, MD, San Antonio, Chairman,
TMA Committee on Disaster Medical Care.

Sep77

TexasMedicine

hoosing the right antibiotic
omputed cranial tomography
edical service conference program
ommunicable diseases in Texas
hy Texas physicians drop out of the Medicaid program

THE LIBRARY ##
ACQUISITIONS DIV.
UNIV. OF CALIFORNIA, S. F.
SAN FRANCISCO CA 94143

LIBRARY
U.C. SAN FRANCISCO
SEP 21 1977

Torbett-Hutchings-Smith Memorial Hospital
and Torbett-Hutchings-Smith Clinic

322 Coleman Street — Marlin, Texas 76661 — Telephone: 883-3561

Post Office Box 60

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.*
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

TRAUMATIC AND ORTHOPEDIC SURGERY
D. R. Swetland, M.D., F.A.C.S.

ALLERGY
S. W. Hughes, M.D.

CARDIOLOGY
W. F. McKinley, Jr., M.D.

OBSTETRICS AND PEDIATRICS
William Pickvance, M.D.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
Ronald E. Henderson, Jr., M.D.
David M. McTaggart, M.D.
S. M. Bunn, Jr., M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.*
Howard L. Smith, M.D., F.A.C.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

NEUROSURGERY
Harry H. Slade, M.D., F.A.C.S.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Associate Administrator:
Larry Parsons

Director-Coordinator, Nursing Service:
Vera Bee, R.N.

Director of Patient Care:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

*Expired May 17th, 1977.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street — DALLAS, TEXAS 75211 — Telephone 823-4151

INTERNAL MEDICINE
John B. Allen, M.D., D.A.B.I.M.
Morris E. Magers, M.D., D.A.B.I.M.
Channing Woods, M.D.
Richard C. Stone, M.D., Gastroenterology
Landon W. Stewart, M.D., D.A.B.I.M.
Cloyce L. Stetson, Jr., M.D., D.A.B.I.M.
David S. Sowell, III, M.D., D.A.B.I.M., Cardiology
Don E. Cheatum, M.D., D.A.B.I.M., and D.A.B. Rhu, F.A.C.P., Rheumatology
W. Mark Armstrong, M.D., D.A.B.I.M.
Sam W. Waters, M.D.
George E. Thomas, M.D., D.A.B.I.M.
Steven P. Bowers, M.D., D.A.B.I.M.
Carlos M. Kier, M.D., D.A.B.I.M., Rheumatology

ORTHOPEDIC SURGERY
George S. Phalen, M.D., D.A.B.O.S., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
John B. Miller, III, M.D., D.A.B.O.G.
Vernie D. Bodden, M.D.

PEDIATRICS
Halcuit Moore, M.D., D.A.B.P., F.A.A.P.
P. E. Luecke, Jr., M.D., D.A.B.P., F.A.A.P.
Larry Gray, M.D., D.A.B.P., F.A.A.P.

GENERAL SURGERY
George P. Fosmire, M.D., D.A.B.S., F.A.C.S.
Miller S. Bell, M.D., D.A.B.S., F.A.C.S.

UROLOGY
Harry M. Spence, M.D., D.A.B.U., F.A.C.S.
William H. Hoffman, M.D., D.A.B.U., F.A.C.S.
Richard B. Dulany, M.D., D.A.B.U., F.A.C.S.

RADIOLOGY
Raymond W. Burford, M.D., D.A.B.R.
Joe B. Caldwell, M.D., D.A.B.R.
James B. Evans, M.D., D.A.B.R.

DERMATOLOGY
William N. New, M.D., F.A.A.D., F.A.C.P.

OTOLARYNGOLOGY AND OTOLOGIC SURGERY
D. W. Shuster, M.D., D.A.B.O.

OPHTHALMOLOGY
R. M. Burnside, M.D., D.A.B.O.
James M. Copps, M.D., D.A.B.O.

DENTISTRY AND DENTAL SURGERY
J. Boyd Hollabaugh, D.D.S.
William F. Walton, D.D.S.
George D. Blake, D.D.S.
Larry L. Cowsert, D.D.S.

ADMINISTRATION
C. H. Rosamond, Administrator
Jack Green, Associate Administrator

DIRECTOR OF NURSING SERVICE
Miss Billye J. Norris, R.N.

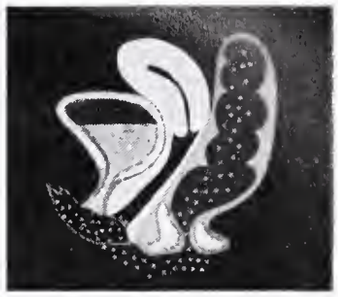
INACTIVE STATUS
George M. Underwood, M.D., D.A.B.I.M., F.A.C.P., Gastroenterology
William H. Potts, M.D., F.A.C.P., Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics and Gynecology
Adam D. Green, M.D., Surgery
B. Celia Slaughter, M.D., D.A.B.P., F.A.A.P.
John B. Bourland, M.D., D.A.B.O.G.

ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.



Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register,* 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older:

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see following page.

Her next attack of cystitis may require

the Bactrim™ 3-system counterattack

ROCHE

Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introital colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flora.

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.

Texas Medicine
VOL 73 SEPTEMBER 1977

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION
Don G. Harrel, MD, Dallas
Chairman
Sam N. Key, MD, Austin
Vice-Chairman
Merle W. Delmer, MD, San Antonio, Secretary
Walter A. Brooks, MD, Quanah
R. Harvey Bell, MD, Palestine
C. W. Yates, MD, Rosenberg
Paul R. Meyer, MD, Port Arthur

TMA OFFICERS
John M. Smith, Jr., MD, San Antonio
President
A. J. Gill, MD, Dallas
Vice-President
Mylie E. Durham, Jr., MD, Houston
President-Elect
James G. Morris, MD, Lubbock
Secretary
Ben R. Keller, Jr., MD, Arlington
Treasurer
C. Lincoln Williston, Austin
Executive Director

EDITORIAL STAFF
1905 N Lamar Blvd, Austin 78705
Telephone: 512-477-6704
Marilyn Baker, Executive Editor
Rae Vajgert, Assistant Executive Editor
Elise David, Assistant Editor
Donna Billie, Editorial Assistant
Patty Mullins, Secretary

ADVERTISING STAFF
1801 N Lamar Blvd, Austin 78701
Jon R. Hornaday, Advertising Director
Anne Shelnutt, Advertising Manager

SCIENTIFIC PUBLICATION COMMITTEE
C. W. Daeschner, MD, Galveston
Chairman
Robert Askew, MD, Austin
Vice-Chairman
Ernest C. Butler, MD, Austin
Jesse D. Cone, MD, Odessa
Richard D. Cunningham, MD, Temple
George A. Gates, MD, San Antonio
Tracy R. Gordy, MD, Austin
David P. Green, MD, San Antonio
R. Maurice Hood, MD, Austin
Paxton H. Howard, Jr., MD, Temple
Daniel E. Jenkins, Jr, MD, Houston
Joseph Lancaster, MD, Austin
Francis E. McIntyre, MD, Austin
Paul C. Peters, MD, Dallas
H. Irving Schweppe, Jr., MD, Houston
Karen W. Teel, MD, Austin
Theodore P. Votteler, MD, Dallas

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS
1801 N Lamar Blvd, Austin 78701
c/o Ray Riggs, Business Manager
$4 per year for members; $8 for non-members; $14 for foreign; $6 for libraries, hospitals, and universities; $4 for medical students. Single copy: $1.25.

CHANGE OF ADDRESS
1801 N Lamar Blvd, Austin 78701
c/o Edward R. Bierschenk, Membership Director

Copyright 1977 by the Texas Medical Association. Owned and issued monthly by the Association.

Second Class Postage paid at Austin, Texas, and additional mailing office, under act of March 3, 1879. Publication number 796660.

Postmaster: Please direct correspondence to Marilyn Baker, Executive Editor, 1905 N Lamar Blvd, Austin, TX 7B705.

Contents

Scientific Articles

37 Proper use of antibiotics James W. Smith, MD

42 Computed cranial tomography: experience at The University of Texas Medical Branch Mohammad Sarwar, MD

62 Cloacogenic transitional carcinoma of the anus T. H. Capers, MD

72 Suction catheter technique: a preliminary report on a new device John S. Carleton, MD

76 Improved continuing education through decentralized family physician education Joseph M. Merrill, MD; Fred M. Taylor, MD; G. Anthony Gorry, PhD

Features

81 Nursing education in Texas

91 Why Texas physicians are dropping out of the Medicaid program

Editorials

133 Physicians say low pay, paperwork discourage Medicaid participation Mario E. Ramirez, MD

134 Modern medical care must include access to computed tomography

News

7 Texas legislators pass new nursing home regulations

7 TMA House of Delegates adopts prescription labeling policy

8 TMA medical service conference is Sept 10 in Austin

10 Drs Smith and Ramirez testify at national health insurance hearings

11 Board of Medical Examiners will hold hearing on laboratory billing

15 FDA issues new rules for hearing aid industry

16 New time deposit account available to TMA Members' Retirement Plan members

20 Laetrile test urged by National Council on Drugs

21 FDA will require warnings with estrogen and progestin

Departments

25 Capital Comments

30 Continuing Education

32 Meetings

80 Information for Authors

99 Medicine and the Law

101 Medical Newsmakers

104 Medicine and Literature

108 Deaths

132 Letters

On The Cover

"Antibug" may be very effective against a number of microorganisms, but when it comes down to treating a specific patient in whom a specific "bug" has not only set up housekeeping but colonized as well, the watchwords are Know Your Antibiotics. The article starting on page 37 offers helpful information for all physicians.

All oral bronchodilators are pretty much the same. Right? Wrong!

The difference is in their action—both before and after symptoms begin. That's the reason for TEDRAL®.

- □ effective and prolonged bronchodilation from the synergistic effect of ephedrine and theophylline
- □ β-ADRENERGIC ACTION RELAXES BRONCHIAL SMOOTH MUSCLE
- □ α-ADRENERGIC ACTION REDUCES BRONCHIAL EDEMA AND SECRETIONS
- □ dosage forms to meet individual patient needs

For proven performance...

Tedral®/Tedral® SA/Tedral® Elixir

Each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer), 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer), and 25 mg phenobarbital in the immediate release layer.

SUSTAINED ACTION

Each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine HCl, and 2 mg phenobarbital; the alcohol content is 15%.

See next page for brief summary.

WARNER/CHILCOTT
Division, Warner-Lambert Company
Morris Plains, New Jersey 07950 T-GP-72-B/W

TEDRAL®

TEDRAL® SA Sustained Action

TEDRAL® Elixir

CAUTION: Federal law prohibits dispensing Tedral SA without prescription.

Description. Tedral: each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Tedral SA: each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer); 25 mg phenobarbital in the immediate release layer.

Tedral Elixir: each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine hydrochloride, and 2 mg phenobarbital; the alcohol content is 15%.

Indications. Tedral, Tedral SA, and Tedral Elixir are indicated for the symptomatic relief of bronchial asthma, asthmatic bronchitis, and other bronchospastic disorders. They may also be used prophylactically to abort or minimize asthmatic attacks and are of value in managing occasional, seasonal or perennial asthma.

Tedral SA (Sustained Action) offers the convenience of b.i.d. dosage.

Tedral Elixir is convenient for persons who may have difficulty in swallowing tablets.

These Tedral formulations are adjunets in the total management of the asthmatie patient. Acute or severe asthmatic attacks may necessitate supplemental therapy with other drugs by inhalation or other parenteral routes.

Contraindications. Sensitivity to any of the ingredients; porphyria.

Warnings. Drowsiness may occur. PHENOBARBITAL MAY BE HABIT-FORMING.

Preeautions. Use with caution in the presence of cardiovascular disease, severe hypertension, hyperthyroidism, prostatic hypertrophy, or glaucoma.

Adverse Reactions. Mild epigastrie distress, palpitation, tremulousness, insomnia, difficulty of micturition, and CNS stimulation have been reported.

Average Dosage. *Prophylaetic or Therapeutic.*

Tedral: *Adults*—One or two tablets every 4 hours. *Children*—(Over 60 lb) one-half the adult dose.

Tedral SA: *Adults*—One tablet on arising and one tablet 12 hours later. Tablets should not be chewed. *Children*—Not established for children under 12.

Tedral Elixir: Note: One teaspoonful is equivalent to *one-quarter* Tedral tablet. *Children*—One teaspoonful per 30 lb body weight, every 4-6 hours, unless prescribed otherwise by physician. Should be given to children under 2 years of age only with extreme caution. *Adults*—One to two tablespoonfuls every four hours.

Supplied. Tedral: White, uncoated seored tablets in bottles of 24 (N 0047-0230-24), 100 (N 0047-0230-51) and 1000 (N 0047-0230-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0230-11).

Tedral SA: Double-layered, uncoated, coral/mottled white tablets in bottles of 100 (N 0047-0231-51) and 1000 (N 0047-0231-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0231-11).

Tedral Elixir: Dark red and cherry-flavored in 474 ml (16 fl oz) bottles (N 0047-0242-16).

STORE BETWEEN 59° and 86°F (15° and 30°C).

Full information is available on request.

No one wakes up thinking, "Today I'm going to abuse my child."

Abuse is not something we think about, it's something we do.

Last year in America, an estimated one million children suffered from abuse and neglect, and at least 2,000 of them died needless, painful deaths.

The fact is, child abuse is a major epidemic in this country.

The solution? Part of it lies in your hands. With enough volunteers, local child abuse prevention programs could be formed to aid parents and children in their own communities. With your help, eighty percent of all abusers could be helped. Please. Write for more information on child abuse and what you can do.

What will you do today that's more important?

A Public Service of This Magazine & The Advertising Council

Ad Council

We need your help. Write:

National Committee for Prevention of Child Abuse, Box 2866, Chicago, Illinois 60690

News in brief

Nursing homes Legislation passed by Texas legislators meeting in Austin in July may shift primary on site responsibility for inspection of patient care at nursing homes from the Texas Department of Human Resources to the Texas Department of Health . . . 7

Fall conference Three medical leaders, a US Congressman from Texas, and two informative panels will be featured at TMA's Conference on Medical Service, Sept 10 in Austin. Panel sessions will provide details on professional liability insurance in Texas and new state laws affecting Texas physicians . . . 8

Laboratory billing The Texas State Board of Medical Examiners will examine HB 1309, the clinical laboratory billing law, before announcing any rules or guidelines. The bill will require physicians and other professionals who bill patients for tests which are performed by laboratories outside their offices to provide patients with the name of the laboratory and the amount paid for the tests . . .11

Retirement plan & trust A new time deposit open account will be available to TMA physicians and their employees under the TMA-Members' Retirement Plan & Trust effective immediately . . . 16

Natural death act A new law allowing terminally ill patients to have their own life support measures withdrawn became effective Aug 29, 1977, in Texas. The Texas Natural Death Act states that an adult can sign a document saying that a physician can halt life support measures that would only artificially prolong the moment of death . . . 16

Laetrile The National Council on Drugs has advocated a scientific test of Laetrile on cancer patients. "The time is ripe, in 1977, for a controlled clinical trial of Laetrile," the Council declared . . .20

News in detail

Texas legislators pass new nursing home regulations

Legislation passed by Texas legislators meeting in Special Session in Austin in July may shift primary on site responsibility for inspection of patient care at nursing homes from the Texas Department of Human Resources to the Texas Department of Health.

The bill, which strengthens nursing home regulation, was passed by the House and the Senate and signed by Gov Dolph Briscoe. The bill became effective immediately.

Under the new legislation, the health department will be required to hold a hearing once a year in every nursing home in the state to hear complaints from patients or relatives. The nearest relative or guardian will be notified of the hearing.

The Texas Department of Health will also be able to suspend the license of a nursing home in cases where a resident's health or safety is under immediate threat.

Failure to report the abuse of nursing home residents becomes a crime under the new legislation, with a maximum penalty of one year in jail and a $2,000 fine.

The health department will be required to make at least one unannounced inspection of every nursing home every year. Also added is a requirement that every nursing home patient rereceive a medical examination at least once a year.

TMA House of Delegates adopts prescription labeling policy

In the best interest of the patient, the prescription container should, as a rule, be labeled with the name and strength of a drug, states a position adopted by the TMA House of Delegates in May 1977.

The policy, proposed by the TMA Board of Councilors, reaffirmed the previous TMA positions that the individual physician should decide whether prescriptions filled by pharmacists should be labeled with the names and strengths of prescribed drugs.

The procedure, states the new policy, is consonant with the ethics of medicine and pharmacy, and with the physician's responsibility to decide if the prescription label should or should not identify the drug.

In its proposal, the Board of Councilors also recommended that physicians always designate the number of refills the patient should have, and that only the number of doses usually required be prescribed.

In a less sophisticated era, when the art of medical practice outweighed scientific knowledge, said the Board of Councilors, physicians did not tell their patients the identity of prescribed medications.

The Board of Councilors recommended that physicians should adopt the policy unless disclosure would be detrimental to the welfare of the patient.

The statement includes the following points in support of the practice of labeling:

1. The patient has the right to be informed about his illness and the medications prescribed.

2. In emergency situations, such as accidental poisoning, overdosage, or attempted suicide, immediate identification of a prescription drug from the label may be lifesaving.

3. The information is invaluable when the patient changes physicians, moves to another locality, or contacts the prescribing physician at a time when records are not readily available.

4. The information is valuable in group practices when the patient may not always have the same attending physician.

5. Patients with allergies should know what is being prescribed.

6. Labeling helps prevent mix-ups when two or more drugs are being taken concurrently, or between medications being taken by different family members.

7. Should it become necessary to issue a warning against the use of a particular drug, labeling serves as a danger signal to those who have been given prescriptions for the drug.

There are occasions when such labeling is inadvisable for psychological or other reasons, and

the physician is the one who must decide, said the Board of Councilors.

The physician's explanation to his patient regarding the purpose of the prescribed drug, and what may be expected from it, together with the public's growing awareness of the effect of drugs (both beneficial and harmful) will help minimize problems which may occasionally occur, the Board concluded.

TMA medical service conference is Sept 10 in Austin

Three medical leaders, a US Congressman from Texas, and two informative panels will be featured at TMA's Conference on Medical Service, Sept 10 in Austin.

Featured speakers include Tom Nesbitt, MD, AMA president-elect; Hon Robert Krueger, US Congressman from New Braunfels; Kenneth Platt, MD, medical director of the Colorado Foundation for Medical Care; and Ralph Emerson, MD, immediate past president of the Medical Society of the State of New York.

Panel sessions will provide details on professional liability insurance in Texas and new state laws affecting Texas physicians.

Dr Nesbitt, a Nashville urologist, has long been involved in medical affairs. The graduate of Southwestern Medical School, The University of Texas Health Science Center at Dallas, is a former Vice-Speaker and Speaker of the AMA House of Delegates.

He is a member of the Coordinating Council on Medical Education, the American Urological Assocation, and the American Association of Clinical Urologists. Dr Nesbitt is also a member of the National Advisory Council on Graduate Medical Education to the Secretary of HEW.

Rep Krueger, was elected to the House of Representatives in 1974, and has announced his candidacy for the 1978 Texas US Senate race. Prior to his election, Rep Krueger, who received his BA from Southern Methodist University, his Masters from Duke University, and his doctorate from Oxford, returned to Texas from teaching and administrative positions at Duke.

In Congress, Rep Krueger has worked to decontrol the price of natural gas at the wellhead. Rep Krueger has sponsored a number of bills to assist American agriculture, and has maintained a strong commitment to federal support for agricultural research. During his first term in Congress, he was voted "the most effective freshman Democrat in the House of Representatives" in a survey of the offices of his freshman Democratic colleagues.

Dr Platt has been the medical director for the Colorado Foundation for Medical Care since 1972. He has also served as president, a member of the Board of Trustees, and a member Executive Committee of the Colorado Medical Society. He has been a member of various committees of the Colorado Medical Association including medical education, constitution, public policy, and awards.

Dr Emerson is immediate past president of the Medical Society of the State of New York.

He has also been active in the American Medical Association and is currently president-elect of the Conference of Presidents and Officers of State Medical Associations.

From left to right, Kenneth Platt, MD, medical director of the Colorado Foundation for Medical Care; Tom Nesbitt, MD, AMA president-elect; Hon Robert Krueger, US Congressman from New Braunfels; and Ralph Emerson, MD, president-elect of the Conference of Presidents and Officers of State Medical Associations, will be featured speakers at the TMA Medical Service Conference Sept 10 in Austin.

THE ROMANS

HAD A PHRASE FOR IT...

CAVEAT EMPTOR

It's always wise to know what you buy....

THE TEXAS MEDICAL ASSOCIATION

takes pride in their insurance brochure which describes the various provisions of the Group Insurance Plans

TERM LIFE
LONG TERM DISABILITY
OFFICE OVERHEAD EXPENSE DISABILITY
PERSONAL ACCIDENT
and
MAJOR MEDICAL EXPENSE

Compare
DOLLAR for DOLLAR
BENEFIT for BENEFIT

Know what you are buying and then buy the plan most suitable to your needs.

Write for a detailed T.M.A. Insurance Brochure today

TEXAS MEDICAL ASSOCIATION

Insurance Service Office
1801 N. Lamar Blvd.
Austin, Texas 78701

Underwritten By **Prudential**

The conference program is open to all TMA members. There is no registration fee.

The program begins at 8:30 am and continues through 2:45 pm in the Joe C. Thompson Center.

There will be an Orientation Program for new and transfer members. TMA boards, councils, and committees will meet Sept 9, 10, and 11.

Conference participants will be guests of TMA for the luncheon Sept 10 at the Joe C. Thompson Center.

Drs Smith and Ramirez testify at national health insurance hearings

John M. Smith, Jr, MD, San Antonio, TMA president, and Mario E. Ramirez, MD, Rio Grande City, chairman of the TMA Council on Tax-Financed Health Care Programs, testified at hearings before the National Advisory Committee on National Health Insurance in Austin and San Antonio in July.

The meetings, headed by HEW Under Secretary Hale Champion, were two of several being held nationally to provide the committee with information to President Carter.

The National Advisory Committee is composed of 30 persons representing citizens and professionals in the health field or in state and local governments responsible for health care programs and services. Texas is represented on the committee by Manuel Solis, director of the Rio Grande Federation of Health Centers, San Antonio. Edgar T. Beddingfield, Jr, MD, chairman of the AMA Council on Legislation, is also a member of the committee.

John M. Smith, MD, TMA president, addresses members of the National Advisory Committee on National Health Insurance at a hearing in Austin in July.

The Austin meeting focused on administration of federal and state health programs and the San Antonio meeting was about migrant and rural health care.

Speaking in San Antonio, Dr Ramirez said, "It is difficult to attract physicians or nurses or other paramedical personnel to come to an area such as this is to practice.

"Health for migrant workers has always been a problem," Dr Ramirez said. "The government has tried to help with categorical grants and with migrant health clinics. Unfortunately a good percentage of this money has to be spent on administrative costs and too little actually goes for health care. It is often difficult to recruit full time health personnel to staff clinics on an itinerant basis and the clinics at best can provide public health measures and only some semblance of fragmented primary care.

"Federal grants to migrant clinics do not provide funds for any type of hospital care. We have tried desperately to point out that herein lies the greatest need of all but it has been to no avail," Dr Ramirz said.

"An insurance policy, such as is available to Medicaid recipients, would solve this problem. It would bring the recipient into the mainstream of care wherever he might be," he said.

Dr Ramirez provided the committee with a detailed account of the administration of his practice and medical services offered in Rio Grande City. "Oftentimes regulations are made to be applied to large institutions such as Cook County Hospital and then indiscriminately are applied to small hospitals such as ours in Starr County, Texas. This cannot be, and it is doing much more harm than good.

"All of us agree that some type of assistance is needed; possibly complete coverage for the medically indigent, partial assistance for others, dependent on need and catastrophic coverage for all through mechanisms that are mutually acceptable," Dr Ramirez concluded.

In his speech on state roles in certification and licensure Dr Smith stressed that licensure

and certification are the prerogatives of the states.

Turning to the larger scope of health care delivery, Dr Smith emphasized that, "The health delivery problems of the ghettos of New York City are quite different from the health care problems of the migrant and farm working population of South Texas.

"It has been, and should continue to be, the prerogative of the individual states to select and choose from among the ideas and proven health care delivery methods those which are best suited to the respective states' needs," Dr Smith said.

"We know what our needs are and I'm sure the New York people know what their problems are," he said.

Board of Medical Examiners will hold hearing on laboratory billing

The Texas State Board of Medical Examiners will examine HB 1309, the clinical laboratory billing law, before announcing any rules or guidelines.

The bill, passed by the 65th Texas Legislature and signed by Gov Dolph Briscoe, will require physicians and other professionals who bill patients for tests which are performed by laboratories outside their offices to provide patients with the name of the laboratory and the amount paid for the tests.

HB 1309 does not apply to laboratories which actually are a part of the offices of physicians. The legislation will pose no additional obligation on the physician if the laboratory bills the patient directly for those services. The bill does not include x-rays.

Both the American Medical Association and the Texas Medical Association support the principle that all physicians should bill patients directly for their services.

The State Board of Medical Examiners will conduct a public hearing prior to the promulgation of any guidelines or rules.

The public hearing is not expected to be scheduled until later this year. The TMAC Council on Medical Legislation and the TMA Board of Councilors will present a position statement at the hearing representing the Texas Medical Association.

The legislation will apply to those physicians who bill patients for tests which are performed by outside laboratories.

FDA announces rules for intrauterine devices

The Food and Drug Administration (FDA) has announced labeling rules for intrauterine devices (IUDs) that will require physicians to provide women patients with a brochure on possible risks before the contraceptive device is inserted.

The FDA requirement will become effective Nov 7.

The mandatory brochure must describe what an IUD is, what conditions make an IUD unsuitable for a woman, use directions, side effects, and a special warning about problems that might develop.

Texas Medical Association coordinates Physician's Placement Service

The Texas Medical Association coordinates a Physician's Placement Service for communities seeking physicians, physicians seeking associates, and physicians seeking locations.

Two publications, "Physicians Seeking Locations in Texas" and "Opportunities for Practice in Texas," are prepared and distributed bimonthly.

Physicians seeking locations receive the list of opportunities while communities and physicians receive the list of physicians available for practice.

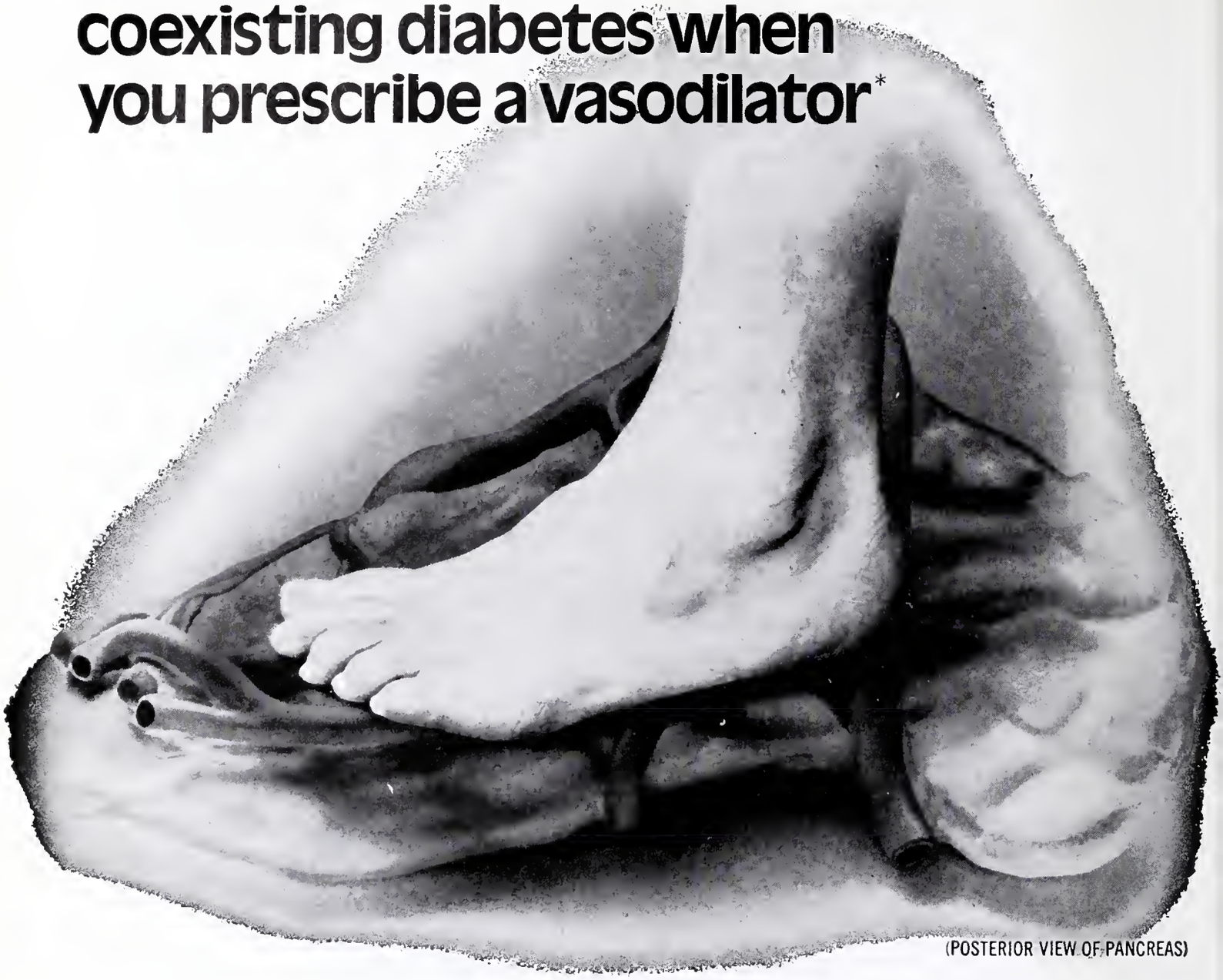
The service is provided without charge. For information write the Department of Medical Service, Texas Medical Association, 1905 N Lamar Blvd, Austin, 78705.

Medical screenings show incompletely immunized children

Medical screening of children in the Aid to Families with Dependent Children program by the Texas Department of Health (formerly the Texas Department of Health Resources) has shown that about one-half of the youngsters under six years of age are found to be incompletely immunized.

Medical screening of children is done through the Early and Periodic Screening, Diagnosis and Treatment Program. The screenings are performed from the rolls of children on Department of Public Welfare Aid to Families with Dependent Children rolls.

consider the effect on coexisting diabetes when you prescribe a vasodilator*



(POSTERIOR VIEW OF PANCREAS)

no interference in the management of the diabetic patient has been reported with

VASODILAN®
(ISOXSUPRINE HCl)

the compatible vasodilator TABLETS, 20 mg.

*__Indications:__ Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.
Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily.

Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

Mead Johnson LABORATORIES

© 1977, MEAD JOHNSON & COMPANY, EVANSVILLE, INDIANA 47721 U.S.A. MJLS-4117R1

Communicable diseases decline in Texas

In 1976, the Texas Department of Health received reports of one case of diphtheria, 12 cases of tetanus, 36 cases of pertussis, 0 cases of polio, 266 cases of measles, and 263 cases of rubella.

Total number of cases of these immunizable diseases was 577, compared to a total of 17,601 for all reported cases of the diseases in 1970. The 1970 figure was a year prior to the passage and funding of child-care facility and school immunization laws and intensified preschool immunization activities.

The totals in past years for Texas include: diphtheria—5,756 cases in 1933; measles—86,086 cases in 1958; pertussis—16,590 cases in 1943; polio—2,778 cases in 1950; tetanus—157 cases in 1942; and rubella—8,409 cases in 1970.

Texas Legislature changes names of health and welfare departments

During the recent session of the Texas Legislature, the name of the state health agency was changed to the Texas Department of Health and the name of the state welfare department was changed to Texas Department of Human Resources.

These changes became effective Aug 29.

	DIPHTHERIA		MEASLES		PERTUSSIS		POLIO		TETANUS		RUBELLA	
YEAR	MORB.	MORT.	MORB.	MORT.	MORB.	MORT.	MORB.	MORT.	MORB.	MORT.	MORB.	MORT.
1965	28	3	30,771	44	689	7	19	4	41	32		
1966	35	6	25,566	39	1,114	9	73	4	28	30	140	
1967	72	11	13,411	14	846	4	10	2	44	34	640	
1968	131	11	5,204	5	802	7	22	7	17	13	2,923	
1969	75	11	4,943	4	381	4	6	1	22	15	4,363	
1970	234	8	8,494	20	437	1	22	5	14	11	8,409	
1971	56	3	9,585	9	282	2	4	1	10	10	4,414	
1972	41	1	1,617	5	185	1	4	2	20	13	1,596	0
1973	18	0	532	1	115	1	0	0	10	6	1,136	3
1974	9	2	212	2	99	1	0	0	4	3	317	0
1975	6	0	275	1	137	0	2	0	16	8	370	1
1976	1		265		36		0		12		267	

Source: Texas Department of Health

Baylor will administer mental health care project

Finding ways to treat emotional problems that often accompany physical illness among the underprivileged has long been a problem, but a newly funded project administered by Baylor College of Medicine will test a new approach for delivering health and mental health care to the poor and training professionals to meet these needs.

The three-year training grant was awarded by the Division of Manpower and Training of the National Institute of Mental Health to the Houston Primary Care Mental Health Training Consortium.

The Consortium comprises Baylor, the University of Houston Graduate School of Social Work, the University of Texas School of Nursing at Houston, the Mental Health and Mental Retardation Authority of Harris County, and the Harris County Hospital District. The grant provides approximately $150,000 per year to integrate mental health care with primary physical care in neighborhood settings.

Galveston scientists receive March of Dimes research grants

Two birth defects of body chemistry, one associated with lung and liver disease and the other with immune deficiency, are the subjects of new March of Dimes research grants awarded to two scientists at The University of Texas Medical Branch in Galveston.

Dr Jose C. Gan, associate professor in the division of biochemistry, department of human biological chemistry and genetics, and Dr Randall M. Goldblum, assistant professor of pediatrics, have been awarded a total of $43,000 for the first year of two-year studies.

National Cancer Institute awards grant to Baylor College of Medicine

The National Cancer Institute has awarded a five-year $5.3 million grant to Baylor College of Medicine scientists investigating the major molecular changes that take place in the nucleus of cancerous and non-cancerous cells.

The cancer research program will provide support for twelve major research projects being conducted in Baylor's department of pharmacology.

In addition, the Baylor scientists will be concerned with pre-clinical and clinical testing of new anti-cancer drugs.

TMA Executive Board will meet Sept 11 in Austin

The TMA Executive Board will meet Sept 11 in Austin.

The board will consider recommendations of the TMA Ad Hoc Committee to Study the Organization's Structure and Function.

Executive board members heard a previous report by the ad hoc committee at the July meeting of the Executive Board.

At the July meeting board members also considered the new professional liability insurance legislation passed by the 65th session of the Texas Legislature. After the meeting John M. Smith, MD, TMA president, appointed members to an Ad Hoc Committee to Study Self-Insurance Trusts.

Members of the committee include Milton V. Davis, MD, Walter Brooks, MD, Presley H. Chalmers, MD, Merle Delmer, MD, and E. Don Webb, MD.

A policy statement on computed tomography was approved by Executive Board members. The policy declares that computed tomography scanners can have positive impact on limiting cost and improving the quality of care when appropriately located, properly utilized and correctly supervised.

The new policy states that, "Computed tomography involves the exposure of patients to ionizing radiation. Its use should be restricted to individuals with the necessary training in radiation protection to optimize examination safety. Radiation physics support should also be available.

"The number of different imaging procedures available in diagnostic radiology, i.e., ordinary diagnostic procedures, ultrasound, angiography, radionuclide scanning, and computed tomography make selection of appropriate studies for a specific patient increasingly difficult. Ideally, the clinician should develop expertise with all of these imaging modalities to determine which

procedure is best suited to a specific clinical situation. This can be best accomplished through continuing education at the hospital medical staff level and through appropriate consultation with specialists in the imaging field.

"Through reduction or elimination of hospital stays, replacement of other expensive and more hazardous diagnostic studies, and avoidance of some operative procedures, cost should be contained. Earlier and more precise diagnosis will give the opportunity to modify therapeutic approaches which may be expected to improve the outcome and/or the quality of life.

"Access to this new technology must, therefore, be assured to those patients who may be expected to benefit from the procedure," the policy states.

Health department will provide materials to combat venereal disease

The Texas Department of Health (formerly the Texas Department of Health Resources) has new materials for private physicians to give to patients who have gonorrhea.

The materials are a pamphlet and cards doctors can give to patients urging them to pass the cards on to their sexual contacts.

The new pamphlet briefly explains gonorrhea to a patient and supplies the person with a card to give to each sexual contact. The cards tell the contacts that they may need medical treatment, and that they should seek help from a private physician or public health clinic. Each card has a blank space for the clinic's address.

Physicians can order free supplies of pamphlets and referral cards from the Literature and Forms Unit, Texas Department of Health, 1100 W 49th St, Austin, Texas 78756. Request stock number 6-122. The department recommends that at least two referral cards be given with each pamphlet.

Public health clinics have been using this pamphlet technique to trace gonorrhea cases. One study shows the card method can be as successful as when field investigators trace contacts personally.

The department has developed three other new pamphlets available free of charge.

"Facts to Share" (stock no. 640) is a patient education pamphlet that discusses all the common sexually transmitted diseases. Also available free from the state health department literature and forms department are two physician-oriented pamphlets "Interpreting Serologic Tests for Syphilis" (stock no. 6115) and "Criteria and Techniques for Diagnosis of Gonorrhea and Syphilis" (stock no. 6119).

The health department program implements a Texas law that also applies to private physicians. The law says health care providers should instruct patients about VD prevention and report "gonorrhea, syphilis or chancroid" cases they know of to the local or state health department.

FDA issues new rules for hearing aid industry

The Food and Drug Administration's new rules for the hearing aid industry became effective Aug 15, 1977.

The new rules require a medical evaluation for hearing loss before a person can be fitted with a hearing aid. However, the rules do permit a waiver for informed adults 18 years of age and older.

The new rules require the manufacturers or distributors of the hearing aid to provide a user instructional brochure containing essential information about the hearing aid.

The rules state, "the medical evaluation requirement is based upon the recognition that an unnecessary or partially effective hearing aid device may be substituted for primary medical or surgical treatment, thus depriving the hearing impaired patient of benefit of appropriate medical diagnosis and care resulting in a detriment to health. . . It should be emphasized that the medical evaluation requirement does not require the physician to prescribe, recommend, or certify that a patient may be helped by a hearing aid.

"The provision simply requires that the physician provide the patient with a written statement indicating that the patient's hearing loss has been medically evaluated and the patient may be considered a candidate for a hearing aid."

New time deposit account available to TMA Members' Retirement Plan members

A new time deposit open account will be available to TMA physicians and their employees under the TMA-Members' Retirement Plan & Trust effective immediately.

The interest rate on the new class of deposit will be the maximum allowable by the Federal Reserve Board, currently 7¾% per year. The minimum maturity is three years for the entire account. Interest is compounded quarterly.

In addition to directing new contributions to the new class of deposit, other existing investments under the program can be converted to the open account for a nominal charge, generally $5 per participant.

If funds are currently invested in a Mercantile Certificate of Deposit at a different rate, the funds can be converted to the higher rate open account without interest penalty.

To convert existing investments to the open account, physicians must provide the Trustee with specific written instructions covering the physicians and employees. The deposit is Investment Media #05.

There is a substantial interest penalty for early redemption of the time deposit unless funds are withdrawn from the trust due to death, disability, or attainment of age 59½.

For more information contact Frank C. Ruscitto, Trust Officer, Mercantile National Bank at Dallas, PO Box 5415, Dallas, Texas, 75222, phone 214-741-4181.

Physicians involved in other KEOGH plans should contact the Trustee of their plan for availability of a similar option.

Jack A. Haley, MD, appointed to family practice advisory committee

Jack A. Haley, MD, Houston, has been appointed the TMA representative to the Texas Family Practice Residency Advisory Committee to the Coordinating Board, Texas College and University System.

Dr Haley, a former chairman of the TMA Committee on Liaison with Medical Students, Residents, and Interns, will serve a two-year term on the advisory committee.

The 12-member committee will act in an advisory capacity to review applications for approval and funding of family practice residency training programs, and make recommendations relating to the standards and criteria for approval of residency training programs.

The board was created by HB 282, passed by the 65th Texas Legislature, to fund Texas family practice residency programs.

The legislators allocated $3.3 million for the medical residency training program, $852,700 for fiscal year 1978 and $2,427,932 for 1979.

The legislation authorizes the Coordinating Board to contract with medical schools, licensed hospitals, and nonprofit corporations to provide state funds for family practice residency training programs. Its stated purpose is to improve distribution of family physicians and improve medical care in underserved urban and rural areas.

Natural Death Act now in effect in Texas

A new law allowing terminally ill patients to have their own life support measures withdrawn became effective Aug 29, 1977 in Texas.

The Texas Natural Death Act states that an adult can sign a document saying that a physician can halt life support measures that would only artificially prolong the moment of death. At least two weeks after two doctors have said a patient has a terminal illness, the patient can sign the document.

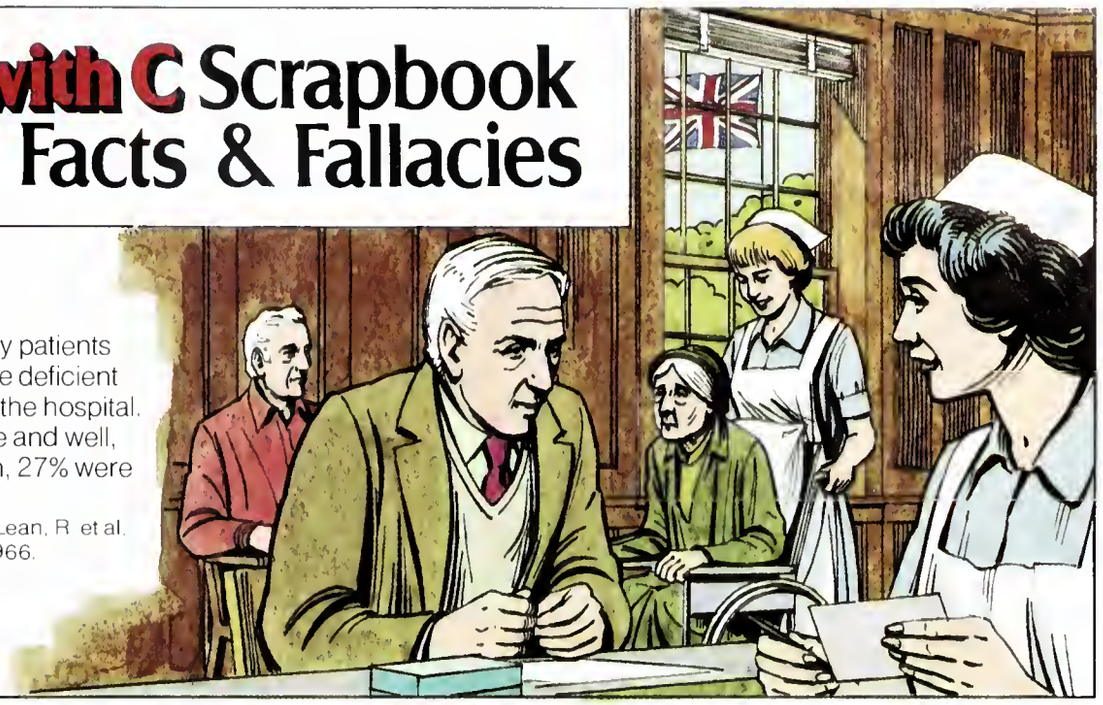
The law states that it cannot be used to allow "mercy killing."

The legislation, introduced by Texas State Sen Ray Farabee, Wichita Falls, says, ". . .where the application of life-sustaining procedures would serve only to artificially prolong the moment of my death and where my physician determines that my death is imminent whether or not life-sustaining procedures are utilized, I direct that such procedures be withheld or withdrawn, and that I be permitted to die naturally."

The directive must be signed by the patient and by two witnesses who are not related to the patient and who will not benefit from any inheritance.

The directive also cannot be witnessed by any physicians, physician's employee, or employee

The ALLBEE® with C Scrapbook of Vitamin Facts & Fallacies



A study conducted among elderly patients in England showed that 41% were deficient in ascorbic acid on admission to the hospital. Even among those living at home and well, or not sufficiently ill for admission, 27% were deficient in ascorbic acid.

Griffiths, L.L., Brocklehurst, J.C., MacLean, R. et al. *Diet in Old Age*, Brit. Med. J., 1:739, 1966.

The loss of riboflavin in milk in a glass container exposed to sunlight for two hours may be as high as 95%.

Quick freezing of vegetables is accompanied by very little ascorbic acid loss. But blanching, washing, and prolonged standing at room temperatures results in considerable reduction in Vitamin C content.

In World War I a unit of 100 beds per division in the Russian army was set aside for scurvy patients. Yet, only 20 cases of scurvy were reported among all American troops in 1917-18.

At least 144 different quality assurance tests are run on the raw materials and manufacturing steps that go into Allbee® with C. The Monogram "AHR" on every capsule is your assurance that this is the original and genuine Allbee® with C and not an imitation.

Available on your prescription or recommendation

ALLBEE® with C

High Potency B-Complex and Vitamin C Formula

A.H. Robins Company, Richmond, Va. 23220 A·H·ROBINS

Spasm reactor?

Donnatal®!

	each tablet, capsule or 5 ml tsp of elixir (23% alcohol)	each Donnatal No. 2 Tablet
Phenobarbital (warning: may be habit forming)	(¼ gr) 16.2 mg	(½ gr) 32.4 mg
Hyoscyamine sulfate	0.1037 mg	0.1037 mg
Atropine sulfate	0.0194 mg	0.0194 mg
Hyoscine hydrobromide	0.0065 mg	0.0065 mg

Indications: Based on a review of this drug by the NAS/NRC and/or other information, FDA has classified the following indications as possibly effective: adjunctive therapy in the treatment of peptic ulcer; the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis. Final classification of the less-than-effective indications requires further investigation.

Brief summary. Contraindicated in patients with glaucoma, renal or hepatic disease, obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy) or a hypersensitivity to any of the ingredients. Blurred vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur at higher dosage levels, rarely at the usual dosage.

A·H·ROBINS A. H. Robins Company Richmond, Virginia 23220

or patient of the health care facility to which the patient has been admitted.

The directive must be notarized, and the patient's physicians must be certain of its validity before it can be given effect.

The directive is effective for five years, and after that a person may sign a new directive.

A directive can only be honored if it is determined that death is imminent, and life-sustaining measures will not reverse the process.

Texas is one of a handful of states to pass "right-to-die" legislation so far, the American Medical Association says. The Texas law is similar to California's bill, the first passed in the nation.

Legalized voluntary withdrawal from life-prolonging procedures goes under several names in the different states. The statutes are titled "death with dignity," "right to die," or "the living will."

They generally include provisions about who can order the withdrawal or withholding of life-sustaining measures, how to have the formalities executed, how the document becomes effective, how to revoke the document, how physicians are immune from lawsuits for "pulling the plug," and what the penalities are for violations of the stipulations.

New Mexico and Arkansas have somewhat less restrictive laws than Texas. Arkansas' law is the most similar to the "living will" widely distributed by the Euthanasia Education Council. The council's document is not legally binding but expresses the signer's wishes to "be allowed to die and not be kept alive by artificial means or heroic measures."

New credit opportunity act bars credit discrimination

A new federal law, the Equal Credit Opportunity Act, bars creditors of discrimination in all areas of credit.

Physicians and small businessmen may be subject to the law. The law defines a creditor as someone who regularly and in the ordinary course of business grants to customers the right to defer payment for goods or services they purchase. Merely honoring a credit card issued by someone else does not make a creditor for purposes of the Equal Credit Opportunity Act.

Incidental credit, as defined in the act, includes credit that is primarily for personal family or household purposes; is not granted under the terms of a credit card account; is not subject to any finance charges or interest; and is not granted under an agreement allowing the debtor to repay in more than four installments.

The law prohibits discrimination against any applicant for credit because of race, color, religion, national origin, sex, marital status, age, or because the customer receives income from any public assistance program.

Creditors may continue to evaluate credit applicants on the basis of their willingness and ability to repay.

However, the law does impose certain restrictions on questions that may be asked and the way information is considered.

Application forms and procedures for taking and evaluating credit applications should be reviewed to insure compliance with the standards of credit worthiness.

When a customer or patient applies for credit, the employee may not ask about the applicant's sex, race, color, religion, national origin, or about birth control practices or plans to have children.

However, that information may be collected when it is needed for a specific purpose, for example, when it is part of a medical history.

The law includes other specifications about credit.

The law allows persons who have been discriminated against in connection with credit to sue for actual damages and punitive damages. Liability for punitive damages is limited to $10,000 in an individual action and to $500,000 or 1% of the creditor's net worth, whichever is less, in class actions.

For more information write the Federal Trade Commission, Legal and Public Records, Room 130, Washington DC 20580.

Laetrile overdose causes cyanide poisoning

Those who insist on using Laetrile as a treatment for cancer are advised to keep the tablets in childproof containers and to have a cyanide resuscitation kit quickly available.

Laetrile, or amygdalin, is an extract of apricot pits used to treat cancer. Most medical authorities have declared it valueless. And now it is also known to be dangerous.

Death of an 11-year-old girl from accidentally swallowing Laetrile tablets is reported in the Aug 8 *Journal of the American Medical Association*.

A trio of Buffalo, NY physicians report that the child swallowed from one to five tablets of the product. It belonged to her father, who has cancer. The tablets were thought to be harmless by the parent and were contained in a vial along with an assortment of vitamin tablets, the doctors say.

The child became listless within half an hour after swallowing the tablets, and vomited. When breathing became difficult and the child began to lose consciousness, the mother rushed her to a hospital, extensive and heroic treatment measures were instituted, but the child died after 72 hours.

Death was from cyanide poisoning. Laetrile is made from the pits of apricots, which contain cyanide.

James R. Humbert, MD, of State University of New York at Buffalo and the Children's Hospital of Buffalo, and Jonathan H. Tress, MD, and Kathleen T. Braico, MD, declare:

"Due to the increased interest and changing legislation, amygdalin (Laetrile) is becoming more available in this country. Its use is controversial, its potential toxic effects are not well known, and many users consider it harmless. This tragic case emphasizes the potentially fatal effect of this drug in young children."

They recommend that the drug be packaged in childproof containers and that if young children are present in the homes of users, a cyanide resuscitation kit should be available. Such a kit is on the market.

Laetrile test urged by National Council on Drugs

The National Council on Drugs has advocated a scientific test of Laetrile on cancer patients.

"The time is ripe, in 1977, for a controlled clinical trial of Laetrile. This should be done under rigorous scientific conditions, in a variety of selected cancer treatment centers, under the auspices of the National Cancer Institute in cooperation with the Food and Drug Administration," the Council declared.

The statement was prepared by John A. Owen, Jr, MD, chairman of the Task Force on Laetrile of the Council. Dr Owen is an internist and pharmacologist at the University of Virginia School of Medicine, Charlottsville, Va.

Laetrile is a controversial product claimed by some to have effect on cancer. Most medical circles have declared it worthless, but pressure of Laetrile advocates has brought passage of laws in a number of states permitting its use. It still is banned by the Food and Drug Administration and cannot be sent across state lines.

The National Council on Drugs is a relatively new organization made up of representatives of the professional organizations most concerned with drugs and drug therapy.

The Council earlier this year supported attempts of the Food and Drug Administration to consider Laetrile a drug and to require proof of both efficacy and safety prior to release.

"No such proof has appeared. We still insist these conditions be fulfilled," Dr Owen said. "To disregard them is to disregard all that the FDA stands for and to return to the pre-1906 era, when any quack could produce any nostrum he wished and foist it off on the public."

The Council's Laetrile Task Force agreed on three objectives:

* The FDA should earn recognition as an agency whose decisions are based on a scientific methodology and the accumulation of valid and convincing evidence.

* The medical profession as a whole should demonstrate that delicate balance of scientific knowledge and humane concern that characterizes not only a wise doctor but a good doctor.

* We should try to defuse emotional confrontations which accomplish nothing and are detrimental to any sincere effort to obtain the truth. The very appreciable advances that have occurred in conventional cancer therapy have been deliberately downgraded and denied. A comprehensive, factual and ongoing public education program on cancer is desperately needed.

To achieve these objectives the Council urged a clinical trial of Laetrile.

"Such a decision would guarantee for the cancer patient a completely legitimate opportunity

to obtain Laetrile of known strength and purity in a setting that would permit precise diagnosis of the disease and study of the treatment, and where any problem that arose could receive the best medical care available," he said.

The study might explore the effects of Laetrile as (1) a pain-relieving or mood-elevating effect; (2) an effect on immune processes; (3) an amelioration of some of the side-effects of conventional cancer therapy; (4) or other as yet unknown effects, Dr Owen said.

"Such a planned and organized approach to an answer would give us all an opportunity to lower our voices, to reconsider our infallibility and to get on with the business of caring for the sick."

The American Medical Association is a participating organization in the National Council on Drugs.

Risks of breast cancer weighed for patients

What are my chances of getting breast cancer?

This is the question that most women ask their doctor sometime during their lives.

In the July 25 *Journal of the American Medical Association,* Theodore C. Bernstein, MD, cancer specialist of the Scripps Clinic and Research Foundation, La Jolla, Calif, offers some guidelines to physicians to help them answer the question.

In one of every 15 women, breast cancer will develop, Dr Bernstein says. Women with an early menarche and those with menopause at 50 years and older have about 1½ times greater risk than those having natural menopause under the age of 45 years. Removal of the ovaries in a woman aged 40 years or less decreases the risk about 50%.

Risk is tripled when first pregnancy occurs after the mother is 35 years of age, he says. Women who have never married are at increased risk. Women who are fat have increased risk.

Birth control pills and hormones given after menopause have been implicated in cancer, but the relationship is not established, Dr Bernstein says. However, there is enough of an association to suggest that estrogens should not be used by high risk patients.

Prior cancer of the uterus, ovary or colon increases risk of breast cancer. The most common premalignant lesion is cancer of the opposite breast. One in ten of those having cancer in one breast will develop cancer in the other.

Risk of breast cancer varies geographically. In Japan women have a much lower rate than in America. When Japanese women migrate to America, the incidence increases after several generations. Exposure to irradiation by mammograph "probably increases the risk, especially in premenopausal women."

Heredity plays a major role in breast cancer risk. Children of women having bilateral breast cancer may have a 50% chance of having the disease. Period of highest risk in women is between the ages of 20 and 40 years. But in women with no heredity risk, the probability of breast cancer development rises with advancing age.

"Indeed, age is probably the most important factor influencing the development of breast carcinoma," Dr Bernstein says.

He concludes, "In advising women about their chances of getting breast cancer, a physician should not lean too heavily on the statistics of risk. One cannot make predictions about a person based on statistics. It is wise to advise every woman to pay close attention. 'Examine yourself each time you bathe and report to me without delay any irregularity you encounter.' "

FDA will require warnings with estrogen and progestin

The Food and Drug Administration has acted to require warning brochures to be issued with estrogen and progestin drugs, reports the *American Medical News.*

The drugs are taken by more than three million women in the United States. Critics have linked the estrogens to uterine cancer if used in large doses. Progestins, prescribed to prevent miscarriages and used in pregnancy tests, aren't effective for preventing miscarriages and could increase the risk of birth defects, the FDA said.

Under a final order issued by the agency, manufacturers of estrogen will be required, as of Sept 21, to provide physicians and druggists with

Promote your continuing education programs.

The staff of TEXAS MEDICINE currently is preparing the 1978 Texas Continuing Education DIrectory for Physicians. The directory will be mailed to all members of the Texas Medical Association in December to assist them in planning their 1978 continuing education schedule.

If your organization will have one or more continuing education programs during the coming year, you will want them listed. This directory will provide greater publicity to all courses which will be offered in Texas and stimulate greater participation in many programs.

Don't miss this opportunity to further promote your continuing education course. Time is limited, so write today for the questionnaire that must be filled out for each listing.

Complete and mail the form below and a questionnaire will be rushed to you. Do it now!

To: Mrs. Marilyn Baker, Executive Editor
TEXAS MEDICINE
1905 North Lamar Blvd., Austin, Texas 78705

Please send me the TMA Continuing Education Course questionnaire in order that my organization may be listed in the 1978 Texas Continuing Education Directory for Physicians.

Name of course _____

Dates _____

Sponsoring Organization _____

Name _____

Address _____

City _____ Zip _____

brochures that advise women of the risks and recommend that the drugs be taken for the shortest time possible. The agency proposed a similar brochure for progestins, to be effective at an undetermined date.

FDA Commissioner Donald Kennedy, PhD, said the patient's right to drug information "especially applies in the case of estrogen and progestin compounds, since these drugs, also used in contraceptive products, may very well be taken by women throughout their adult lives.

"A woman who is considering taking estrogen should be aware that long-term use of these drugs has been associated with cancer of the uterus," he added.

"We are concerned that estrogens are used too frequently and for too long, and our aim is that the information to be provided to patients will lead to better use of these drugs—including less pressure on physicians to prescribe them."

The estrogen brochure is to state that the drugs should not be taken for simple nervousness, depression, or for restoring youthfulness in menopause because estrogens aren't effective for those purposes.

The progestin warning is to state that such drugs "when taken in early pregnancy can increase the risk of birth defects in the offspring, such as heart defects and deformed legs and arms," and that there are safer and more rapid pregnancy tests.

National Student Research Forum will be in Galveston April 26-29, 1978

The 1978 AMSA-UTMB National Student Research Forum, sponsored by the American Medical Association and The University of Texas Medical Branch, will be held in Galveston April 26-29, 1978.

The forum is open to medical students, graduate students associated with medical schools, and interns and residents, who will compete in one of these categories based on their classification at the time of participation.

Research in clinical and basic sciences will be included.

Participants are selected solely on the basis of an abstract of the presentation, which must be submitted with the formal application before Feb 2, 1978. Participants in competition for the Excellence of Research Awards will be required to submit a formal manuscript. Monetary and plaque awards will be given in categories of liver disease, demyelinating diseases, cardiovascular research, immunology and infectious diseases, neuroscience, pharmacology, and surgery.

For further information and application forms, contact AMSA-UTMB National Student Research Forum, Room 209, Basic Sciences Building, The University of Texas Medical Branch, Galveston, TX 77550.

Dengue epidemic is occurring in Jamaica

The US Public Health Service has reported that an epidemic of dengue type 1 is occurring in Kingston, Jamaica, and surrounding areas, according to the Texas Department of Health.

Type 1 never has been reported in the western hemisphere. There is evidence that some travelers returning from Jamaica have dengue-like symptoms.

The type 1 dengue offers a significant hazard to residents of the United States, especially the southern states, warns the Texas Department of Health, because there is a lack of immunity to the disease and a widespread presence of the vector mosquitoes in large numbers.

Dengue virus is a flavivirus (group B arbovirus) which is antigenically related to yellow fever, St Louis encephalitis, and Japanese B encephalitis. There are four serotypes currently recognized designated as types 1-4.

In man, dengue, also known as "breakbone fever," usually begins four to ten days after the bite of an infective mosquito. The disease cannot be spread directly from man to man. There is no animal reservoir in the United States.

In the western hemisphere, only *Aedes aegypti* have been implicated in the transmission. Although mild or inapparent cases may be quite frequent, classical dengue is recognized by the abrupt onset of fever, profound aching, myalgias, "bone pain", headache, and prostration. "Eye pain", aching joints, and red eyes are common. A rash often develops in fair-skinned individuals.

Despite the many reports of dengue "hemorrhagic fever" and dengue "shock syndrome" in Oceania and Southeast Asia, such serious complications have rarely been noted in the many documented epidemics in the western hemisphere, reports the Texas Department of Health.

In the Caribbean and continental United States, dengue epidemics have been observed for 200 years, from the southeastern United States to as far north as Philadelphia. In the 20th century, well-reported epidemics in the southern United States occurred in 1922, 1934, and 1941. Attack rates were often in the 10% range, and occasionally higher.

In the Caribbean, epidemics and sporadic cases of dengue have been documented during the last 25 years, with major epidemics sweeping from west to east through the Antilles in 1963-64, and again in 1968-69. An epidemic of dengue on St Thomas island occurred in late 1976.

Although there is serologic evidence of dengue type 1 in some older individuals, all previous isolations in the western hemisphere have been of either type 2 or type 3. The introduction of type 1 into the Caribbean raises many questions about the ability of adjacent islands and continental areas to resist epidemic spread of this disease.

In cooperation with the national Center for Disease Control and the Bureau of Communicable Disease Services, the Texas Department of Health is requesting assistance from all Texas physicians to report through local and regional health authorities concerning all suspected cases of dengue. The information should include the patient's name, age, sex, recent travel history including dates of travel, a list of symptoms and date symptoms were first noticed, and the attending physician's name and telephone number.

Upon receipt of this information, the Texas Department of Health will attempt to secure further information and coordinate the collection of serum specimens to assist laboratory confirmation. In all suspected cases, a serum specimen should be collected during the first four days of the illness.

Coming next month

Scientific articles scheduled for publication in October are on issues and implications of the right to treatment, disturbed sleep as a function of sleep apnea, lithium, suicide and the family physicians, anxiety and symptom evaluation, a frozen section orientation block, and a case report of infant botulism in Texas.

Investment performance for TMA Members' Retirement Plan and Trust

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1977 through 7/31	3 Years Ended 12/31/76	5 Years Ended 12/31/76	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	— 5.1	- 9.3%	- 8.3%	1.7
Loomis-Sayles Mutual Fund	— 8.0	- 1.6%	- 4.4%	3.8
Mercantile Bank Equity Fund	— 5.9	+ 5.9%	-17.8%	4.1
Mercantile Bank Fixed Income Fund	-- 1.4	+ 0.2%	- 5.5%	7.3
T Rowe Price Growth Stock Fund	— 9.9	- 2.6%	-16.6%	2.2
T Rowe Price New Income Fund	— 2.2	+ 2.7%	N/A	7.8
Stein Roe & Farnham Balanced Fund	—- 8.1	- 0.5%	- 2.7%	3.3
Standard & Poor 500 Stock Average	— 8.0	+10.4%	+ 5.3%	
Dow Jones Industrial Average	—12.9	+18.1%	+12.9%	

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

AUSTIN: STATE BOARD OF MEDICAL EXAMINERS. Gov Dolph Briscoe has appointed Jesse D. Ibarra, Jr, MD, Temple, to the Texas State Board of Medical Examiners. Dr Ibarra will succeed Jose G. Rodarte, MD, Temple, who resigned, and will serve the remainder of a six-year term extending until April 13, 1981.

WASHINGTON: ADVERTISING BY ATTORNEYS. The United States Supreme Court has ruled that advertising of routine services by attorneys would not undermine true professionalism, and might serve to lower the cost of legal services, aid in the administration of justice and assist new attorneys in entering the market. The Court said that while only routine services lend themselves to advertising of prices, such advertising would provide some relevant information to the consumer in the selection of a lawyer and would not result in the delivery of incompetent legal services or in misleading the public.

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber, Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

NEW YORK: PHYSICIANS MAY ADVERTISE. New York physicians may advertise their services and fees in newspapers and magazines, the State Board of Regents of New York has ruled. The regent's action will also allow professionals to advertise their services, but not their fees, on television and radio. The ruling, which becomes effective Oct 1, applies to all professionals except lawyers and clergymen. Advertising that uses testimonials, guarantees results, claims superiority, or is "sensational or flamboyant" will continue to be barred.

ARKANSAS: CONTINUING MEDICAL EDUCATION. Thus far in 1977, three states, Arkansas, Iowa, and New Hampshire, have enacted legislation to either mandate or authorize the Board of Medical Examiners to require continued medical education for physicians. This brings the total of states having enacted such legislation to 21. A 1977 New Mexico amendment to its prior permissive continuing medical education law mandates continued medical education for physicians.

WASHINGTON: LIAISON COMMITTEE ON MEDICAL EDUCATION. The Liaison Committee on Medical Education (LCME) was granted recognition as the accrediting agency for medical schools for a two-year period by the US Office of Education. In a letter to the LCME secretary, Commissioner of Education Ernest L. Boyer concurred with the recommendation of the Advisory Committee on Accreditation and Institutional Eligibility that recognition be extended and that a progress report be made in one year. The LCME's eligibility had been challenged in March by the Federal Trade Commission's Bureau of Competition on grounds of potential conflict of interest.

NEW YORK: GOVERNOR VETOES LAETRILE BILLS. New York Gov Hugh Carey has vetoed two bills that would legalize Laetrile in New York. He said there is overwhelming evidence that nobody benefits from use of the substance, which proponents says is a cancer treatment. The governor had repeatedly promised to block any Laetrile bills.

WASHINGTON: VETERANS ADMINISTRATION PHYSICIANS. The AMA is supporting a bill to increase Veterans Administration physicians' and dentists' pay. The legislation would extend for one year authorization for the Administrator of the Veterans Administration to provide special pay to eligible physicians and dentists. In a letter to the Senate Committee on Veterans Affairs, James H. Sammons, MD, AMA executive vice president, said, "The American Medical Association has been supportive for many years of the federal government's efforts to recruit and retain career-minded health professionals for federal health delivery programs."

NEBRASKA: HOUSESTAFF PRIVILEGES. The right of housestaff to conduct collective bargaining at the University of Nebraska Medical Center has been upheld in a 6-1 decision by the Nebraska Supreme Court. The court rejected the decision of the National Labor Relations Board that housestaff are students and should not have contract bargaining privileges. At the request of the House Officers Association of the medical center, the American Medical Association submitted a "friend of the court" brief in the case. AMA policy states that housestaff are considered both students and employees, and should have the same right to collective bargaining as other employees.

90% of insured Texas doctors choose the occurrence policy.

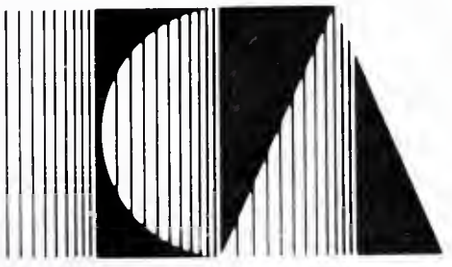
There must be a reason why.

In fact, some surveys show this figure to run as high as 95%. This includes doctors insured in both private and governmental markets.

The fact that so many doctors have chosen this form of professional liability insurance coverage over all others, should tell you something.

It's really as simple as this. You wouldn't insure your home or car with lesser coverage, so why would you have lesser coverage on your most valuable asset — your medical practice.

Give your practice the protection it deserves with a tough, no-nonsense occurrence form policy. Call for your nearest ICA agent today at (713) 526-4863.



INSURANCE CORPORATION OF AMERICA

HOUSTON, TEXAS

A+AAAAA protection provided.

CONTINUING EDUCATION COURSES

SEPTEMBER

Emergency Care

Title: Trauma '77
Sponsor: UT Medical Branch, Galveston
Location of Course: Galveston (tentative)
Date: September 1977
Duration: Continuous; 8 hours instruction per day; 2½ days; Thursday-Saturday; 20 total course hours
Fee: $80 (tentative)
Designed For: General practitioners; Specialists in Emergency Care, Surgery
Enrollment: Minimum, 40; Maximum, 75
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar, television
Contact: NeKee McNulty, Assistant Director, Continuing Education Division, UT Medical Branch, Galveston 77550

Family Medicine

Title: Dallas '77: A Family Affair
Sponsors: Central States Societies of the American Society for Adolescent Psychiatry; A. Webb Roberts Center for Continuing Education, Dallas
Location of Course: Marriott Motor Hotel, Dallas
Dates: Sept 8-11, 1977
Fees: Member, $45; Nonmember, $55; Professionals in training, $20
Credit: 17 hours, AMA Physician's Recognition Award
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Title: Family Practice Recertification Review: What's New Since 1971
Sponsor: UT Health Science Center at San Antonio
Dates: Sept 30-Oct 2, 1977
Fee: $160
Credit: 16 hours, AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Contact: Continuing Education Services, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Gastroenterology

Title: Advances in Gastrointestinal Endoscopy II
Sponsors: UT Health Science Center at Houston; Texas Society of Gastrointestinal Endoscopy
Location of Course: M.D. Anderson Hospital and Tumor Institute, Houston
Date: Sept 17, 1977
Duration: Continuous; 9 am-4 pm; 5 total course hours
Fee: To be announced
Designed For: Specialists in Endoscopy
Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: Blackford Memorial Lectures
Sponsors: Grayson County Medical Society, Denison; Mrs Clara Blackford Smith
Date: Sept 10, 1977
Duration: 7 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: AAFP
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: John D. Gleckler, MD, Chairman, Blackford Memorial Lectures Committee, 211 N Fannin Ave, Denison 75020

Malignant Disease

Title: Medical Oncology
Sponsors: UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute, Houston
Location of Course: M.D. Anderson Hospital and Tumor Institute, Houston
Date: September 1977
Duration: 3 days; 18 total course hours
Fee: To be announced
Designed For: General practitioners; Specialists in Oncology
Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Grant Taylor, MD, Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: Phase I Cancer Counselor Training Workshop
Sponsors: The Routh Street Center, Dallas; Human Resource Center, Graduate School of Social Work, UT at Arlington
Location of Course: Briarwood Presbyterian Retreat Center, Argyle, Tex
Dates: Sept 22-25, 1977
Fee: $180
Designed For: Medical or counseling professionals; Allied health professions
Contact: Routh Street Center, 3535 Routh St, Dallas 75219

Pediatrics

Title: 1977 Texas Pediatric Society Meeting
Sponsor: Texas Pediatric Society, Austin
Location of Course: Hilton Palacio del Rio Hotel, San Antonio
Dates: Sept 15-17, 1977
Duration: 9 am-5 pm Friday; 9 am-12 pm Saturday; 7 total course hours
Fee: Members, $30; Nonmembers, $40
Designed For: Specialists in Pediatrics
Credit: AAFP Elective; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materi-

als, lecture, open question, panel
Contact: J. Thomas Fitch, MD, PA, District Chairman, Texas Pediatric Society, 341 E Hildebrand, San Antonio 78212

Title: Current Concepts in Pediatrics
Sponsor: Texas Tech University School of Medicine, Lubbock
Location of Course: Texas Tech University School of Medicine, Lubbock
Date: Sept 23, 1977
Duration: 5 total course hours
Fee: $50
Designed For: General practitioners; Specialists in Pediatrics
Teaching Methods: Audiovisual materials, lecture, open question, seminar
Contact: Roy C. Allen, EdD, Director, Educational Development and Continuing Education, Texas Tech University School of Medicine, Box 4569, Lubbock 79409

Psychiatry

Title: Basic Freud: First Series
Sponsors: Department of Psychiatry, UT Southwestern Medical School, Dallas
Location of Course: 6601 Hunters Glen, Dallas
Dates: Sept 19, 1977-March 13, 1978
Duration: Intermittent; 1½ hours each Monday; 7:15-8:45 pm
Fee: $200
Credit: 30 hours, Category 1, AMA Physician's Recognition Award
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Other: Mental Health and Mental Retardation

Title: Mental Illness in Children
Sponsor: Texas Department of Mental Health and Mental Retardation; Office for Continuing Education, Texas Research Institute of Mental Sciences
Location of Course: Austin
Dates: Sept 9-10, 1977
Contact: Office of Medical Services Continuing Education, Texas Department of Mental Health and Mental Retardation, Box 12668, Capitol Station, Austin 78711

Other

Title: The Art of Negotiations
Sponsor: American Medical Association
Location of Course: Radisson South Hotel, 7800 Normandale Blvd, Bloomington, Minn
Dates: Sept 10-12, 1977
Fee: AMA members, Medical society staff members, $200; Nonmembers, $275
Credit: 22 hours, Category 2, AMA Physician's Recognition Award
Contact: AMA, Department of Negotiations, 535 N Dearborn St, Chicago 60610

Title: Group Relations in Health Care: An Experiential Conference to Explore Authority, Responsibility, and Organization in Health Care Delivery Systems
Sponsors: A. K. Rice Institute; Department of Psychiatry, Baylor College of Medicine, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Sept 30-Oct 2, 1977
Credit: Category 1, AMA Physician's Recognition Award
Contact: Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

OCTOBER

Emergency Care

Title: Trauma '77
Sponsor: UT Medical Branch, Galveston
Location of Course: Galvez Hotel, Galveston
Dates: Oct 12-15, 1977
Duration: 8 am-5 pm, Thursday-Saturday
Fee: $80
Designed For: Specialists; General practitioners
Enrollment: Minimum, 75. Maximum, 125
Credit: 20 hours AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: NeKee McNulty, Assistant to the Director, Continuing Education Division, UT Medical Branch, John Sealy Hospital, 8th Floor, Galveston 77550

Title: The Injured Patient
Sponsor: UT Health Science Center at Houston
Dates: Oct 31-Dec 12, 1977
Duration: Intermittent; 2 hours each Monday; 7-9 pm; 6 weeks; 12 total course hours
Fee: To be announced
Designed For: General practitioners
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Family Medicine

Title: Infectious Disease for the Primary Care Physician
Sponsor: Continuing Education Division, UT Medical Branch, Galveston
Location of Course: Galvez Hotel, Galveston
Dates: Oct 27-29, 1977
Fee: $80
Credit: 20 hours, Category 1, AMA Physician's Recognition Award
Contact: NeKee McNulty, Assistant to the Director, Continuing Education Division, UT Medical Branch, John Sealy Hospital, 8th Floor, Galveston 77550

MEETINGS

TEXAS MEDICAL ASSOCIATION

Three medical leaders, a US Congressman from Texas, and two panels will be featured at Texas Medical Association's Conference on Medical Service, Saturday, Sept 10, 1977, in Austin. The featured speakers are Tom Nesbitt, MD, American Medical Association president-elect; Hon Robert Krueger, US Congressman from New Braunfels, Tex; Kenneth Platt, MD, medical director, Colorado Foundation for Medical Care; and Ralph Emerson, MD, immediate past president, Medical Society of the State of New York. Panel sessions will explore new state laws affecting physicians and the professional liability situation in Texas. The conference is open to all TMA members, and there is no registration fee. The program begins at 8:30 am at the Joe C Thompson Conference Center, and ends at 2:45 pm. An orientation program for new members, and several board, council and committee meetings have been scheduled in conjunction with the conference.

Contact: C. Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.

TEXAS ACADEMY OF FAMILY PHYSICIANS

The 28th Annual Scientific Assembly of the Texas Academy of Family Physicians will take place Sept 18-20, 1977, in El Paso. The scientific program, planned in cooperation with Texas University Health Sciences Centers, is acceptable for 20 prescribed hours by the American Academy of Family Physicians. John C. Kelly, MD, president, American Academy of Family Physicians, will deliver the keynote address Sunday, Sept 18. The scientific program begins Monday at the El Paso Convention Center. Among the topics the lecturers will discuss are new thoughts on treatment of myocardial infarction, prevention of arterio-sclerotic disease in youth, stress, diagnosis and treatment of the pre-infarction syndrome, pump failure, and basic principles of topic therapy. The agenda also includes social and ladies' programs.

Contact: Donald C. Jackson, Exec Dir, 1901 N Lamar Blvd, Austin, Tex 78705.

CURRENT TEXAS MEETINGS

TEXAS DEPARTMENT OF MENTAL HEALTH AND MENTAL RETARDATION, 1977 Conference on Issues in Forensic Psychiatry, Sheraton Inn, Tyler, Tex, Sep 14-16, 1977. Hosted by Rusk State Hospital. Sponsored by Texas Department of Mental Health and Mental Retardation; Texas Research Institute of Mental Sciences; Office of Continuing Medical Education, University of Texas Health Science Center at Houston; Baylor College of Medicine, Houston; Rusk State Hospital. Contact: Texas Department of Mental Health and Mental Retardation, Box 12668, Capitol Station, Austin, Tex 78711.

TEXAS PEDIATRIC SOCIETY, 55th Annual Meeting, Hilton Palacio Del Rio Hotel, San Antonio, Tex, Sep 15-17, 1977. Combined with meetings of Texas Chapter, American Academy of Pediatrics; Texas Society of Pediatric Surgeons. Scientific program: update on diagnosis, treatment of meningitis in children; screening for detection of cretinism; nutrition for optimal development; immunization: past, present, future; obstipated infant; shaping will without breaking spirit; strategy for management of family in child abuse; sexual attitudes of adolescence; predicting child abuse; mother-infant bonding; ethical issues in newborn medicine; death of a newborn. Entertainment, special events: men's golf tournament, tennis tournament, cocktail reception, river barge ride, executive board dinner, past presidents' and charter members' dinner; ladies tour, luncheon, shopping. Contact: J Thomas Fitch, MD, 314 E Hildebrand, San Antonio, Tex 78212.

TEXAS SOCIETY OF PATHOLOGISTS, Workshop for Pathologist and Office Manager, Separate Billing for Physician Fee Collection, Holiday Inn, Dallas-Fort Worth Airport, Sep 24, 1977. Cosponsored by Blue Cross-Blue Shield of Texas. Registration fees: $12; $6 for residents in pathology. Contact: John Childers, MD, 6011 Harry Hines Blvd, Dallas 75235, or Mark Garza, MD, Box 4550, Station A, Dallas 75208.

For other courses and symposia, see Continuing Education Courses, pp 30-31.

SEPTEMBER

AMERICAN ASSOCIATION OF ELECTROMYOGRAPHY AND ELECTRODIAGNOSIS, Salt Lake City, Sep 30-Oct 1, 1977. JL Melvin, MD, Sec-Treas, 10437 W Watertown Plank Rd, Box 7372, Milwaukee 53226.

■ AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS, INC, STATE OF TEXAS, Austin, Tex, Sep 10-11, 1977. Mildred Banks, Sec, 4309 Ramsey Ave, Austin, Tex 78756.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Hot Springs, Va, Sep 8-10, 1977. GW Mitchell, Jr, MD, Sec, 171 Harrison Ave, Boston 02111.

AMERICAN ASSOCIATION FOR THE SURGERY OF TRAUMA, Detroit, Sep 15-17, 1977. JA Boswick, Jr, MD, Admn Officer, University of Colorado, 4200 E Ninth Ave, Denver 80220.

AMERICAN CANCER SOCIETY, NATIONAL CANCER INSTITUTE, National Conference on the Lymphomas and the Leukemias, New York, Sep 29-Oct 1, 1977. Sidney L Arje, MD, 777 Third Ave, New York 10017.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Hartford, Conn, Sep 10-11, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Lake of the Ozarks, Mo, Sep 16-18, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Chicago, Sep 24-25, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Regional Meeting, Hot Springs, Va, Sep 30-Oct 2, 1977. Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, Seminar on Negotiations, Bloomington, Minn, Sep 10-12, 1977. Department of Negotiations, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, Sep 27-Oct 1, 1977. Ms L Sablack, Exec Sec, 5272 River Rd, Suite 290, Bethesda, Md 20014.

AMERICAN ROENTGEN RAY SOCIETY, Boston, Sep 27-30, 1977. JF Martin, MD, Sec, 300 S Hawthorne Rd, Winston-Salem, NC 27103.

AMERICAN SOCIETY OF INTERNAL MEDICINE, Washington, DC, Sep 28-30, 1977. Exec Dir, 703 Market St #535, San Francisco 94103.

■ AMERICAN SOCIETY OF OPHTHALMOLOGIC AND OTOLARYNGOLOGIC ALLERGY, Dallas, Sep 30-Oct 1, 1977. WA Ward, MD, Sec-Treas, Bowman Gray School of Medicine, Winston-Salem, NC 27103.

INTERNATIONAL CONFERENCE ON RED CELL METABOLISM AND FUNCTION, Ann Arbor, Mich, Sep 14-17, 1977. GJ Brewer, MD, Department of Human Genetics, University of Michigan Medical School, Ann Arbor, Mich 48109.

KENTUCKY MEDICAL ASSOCIATION, Louisville, Sep 25-29, 1977. RG Cox, Exec Vice-pres, 3532 Ephraim McDowell Dr, Louisville 40205.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA, Washington, DC, Sep 15-16, 1977. FP Ferraraccio, Exec Sec, 2007 Eye St NW, Washington, DC 20006.

MID-CONTINENT PSYCHIATRIC ASSOCIATION, Oklahoma City, Sep 9-11, 1977. A Paredes, Sec-Treas, Box 26901, Oklahoma City 63190.

MONTANA MEDICAL ASSOCIATION, Missoula, Mont, Sep 29-Oct 1, 1977. GB Zins, Exec Dir, 2021 11th Ave, Helena, Mont 59601.

PAN AMERICAN MEDICAL WOMEN'S ALLIANCE, San Juan, Puerto Rico, Sep 1-6, 1977. Dr T Foster, Sec, 6417 Pelham St, San Jose, Calif 95123.

RADIOLOGY FOR FAMILY PRACTITIONERS, Santa Fe, NM, Sep 15-17, 1977. WJ Levy, MD, Sec, Symposia de Santa Fe, Box 5175, Santa Fe, NM 87502.

SOCIETY FOR PEDIATRIC RADIOLOGY, Boston, Sep 24-25, 1977. NT Griscom, MD, Sec-Treas, Department of Radiology, Children's Hospital Medical Center, 300 Longwood Ave, Boston 02115.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, El Paso, Tex, Sep 17-20, 1977. Donald C Jackson, 1901 N Lamar Blvd, Austin, Tex 78705.

■ TEXAS CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, San Antonio, Tex, Sep 12-14, 1977. George Pruett, MD, Pres, 730 N Main, B-112, San Antonio, Tex 78205.

■ TEXAS MEDICAL ASSOCIATION, Fall Conference, Austin, Tex, Sep 9-11, 1977. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.

■ TEXAS PEDIATRIC SOCIETY, San Antonio, Tex, Sep 15-17, 1977. J Thomas Fitch, MD, 314 E Hildebrand, San Antonio, Tex 78212.

■ TEXAS SOCIETY OF CHILD PSYCHIATRY, Corpus Christi, Tex, Sep 16-18, 1977. Frank E Crumley, MD, Barnett Tower, Suite 803, 3600 Gaston Ave, Dallas 75246.

UTAH STATE MEDICAL ASSOCIATION, Location to be announced, Sep 13-16, 1977. HW Brewster, Admn Officer, 42 S Fifth East St, Salt Lake City 84102.

OCTOBER

AMERICAN ACADEMY FOR CEREBRAL PALSY AND DEVELOPMENTAL MEDICINE, Atlanta, Oct 5-9, 1977. JE Bryan, Exec Sec, 1255 New Hampshire Ave, Washington, DC 20036.

■ AMERICAN ACADEMY OF CHILD PSYCHIATRY, Houston, Oct 19-21, 1977. VQ Bausch, Exec Dir, 1800 R St NW, Washington, DC 20009.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Las Vegas, Nev, Oct 10-13, 1977. R Tusken, Exec Dir, 1740 W 92nd St, Kansas City, Mo 64114.

■ AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Dallas, Oct 2-6, 1977. 15 Second St SW, Rochester, Minn 55901.

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, Bal Harbour, Miami, Fla, Oct 30-Nov 4, 1977. CC Herold, Exec Dir, 30 N Michigan Ave, Suite 922, Chicago 60602.

AMERICAN ACADEMY OF PSYCHIATRY AND THE LAW, New Orleans, Oct 20-23, 1977. WD Weitzel, MD, Department of Psychiatry, College of Medicine, University of Kentucky, Lexington, Ky 40506.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE, Anaheim, Calif, Oct 2-7, 1977. Joseph J Garvey, Exec Sec, 2317 W Jefferson, Joliet, Ill 60435.

AMERICAN ASSOCIATION OF PUBLIC HEALTH PHYSICIANS, Washington, DC, Oct 30-Nov 1, 1977. JV Sessums, Jr, MD, Sec-Treas, 1703 Ridgemont, Austin, Tex 78723.

AMERICAN ASSOCIATION FOR THE STUDY OF LIVER DISEASES, Chicago, Oct 31, 1977. MA Rothschild, MD, Sec-Treas, VA Hospital, First Ave at E 24th St, New York 10010.

AMERICAN CLINICAL AND CLIMATOLOGICAL ASSOCIATION, Colorado Springs, Colo, Oct 23-26, 1977. JE Wood, MD, Sec-Treas, Pennsylvania Hospital, Philadelphia 19107.

AMERICAN COLLEGE OF CHEST PHYSICIANS, Las Vegas, Nev, Oct 30-Nov 3, 1977. 911 Busse Highway, Park Ridge, Ill 60068.

AMERICAN COLLEGE OF GASTROENTEROLOGY, New Orleans, Oct 23-29, 1977. D Weiss, Exec Dir, 299 Broadway, New York 10007.

AMERICAN COLLEGE OF PREVENTIVE MEDICINE, Atlanta, Oct 30-31, 1977. W Bentley, Exec Dir, 801 Old Lancaster Rd, Bryn Mawr, Pa 19010.

■ AMERICAN COLLEGE OF SURGEONS, Dallas, Oct 17-21, 1977. CR Hanlon, Dir, 55 E Erie St, Chicago 60611.

■ AMERICAN COUNCIL OF OTOLARYNGOLOGY, Dallas, Oct 6, 1977. Harry W McCurdy, MD, FACS, Exec Dir, 1100 17th St, NW, Suite 602, Washington, DC 20036.

AMERICAN DENTAL ASSOCIATION, Miami, Oct 9-13, 1977. C Gordon Watson, DDS, 211 E Chicago Ave, Chicago 60611.

AMERICAN DIETETIC ASSOCIATION, Los Angeles, Oct 10-14, 1977. Clara Zempel, RD, 430 N Michigan Ave, Chicago 60611.

■ AMERICAN GROUP PRACTICE ASSOCIATION, Houston, Oct 5-8, 1977. WG Davis, MD, Exec Vice-pres, 20 S Quaker Lane, Box 949, Alexandria, Va 22313.

■ AMERICAN INSTITUTE OF ULTRASOUND IN MEDICINE, Dallas, Oct 29-Nov 4, 1977. D LaMaster, Mng Editor, Box 25606, Oklahoma City 73125.

AMA REGIONAL MEETING, Huron, Ohio, Oct 7-9, 1977. AMA, Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMA REGIONAL MEETING, Honolulu, Oct 30-Nov 3, 1977. AMA, Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMA SEMINAR ON NEGOTIATIONS, Atlanta, Oct 15-17, 1977. AMA, Department of Negotiations, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL RECORD ASSOCIATION, Atlanta, Oct 16-21, 1977. Mary-j Waterstraat, RRA, 875 N Michigan Ave, Chicago 60611.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, October 1977. L Sablack, Exec Sec, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN PHYSIOLOGICAL SOCIETY, St Louis, Oct 22-27, 1977. OE Reynolds, PhD, Exec Sec-Treas, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SCHOOL HEALTH ASSOCIATION, Atlanta, Oct 13-16, 1977. SJ Jerrick, Exec Dir, Box 708, ASHA National Office Bldg, Kent, Ohio 44240.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, New Orleans, Oct 15-19, 1977. JW Andes, Exec Sec, 515 Busse Highway, Park Ridge, Ill 60068.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, Atlanta, Oct 17-23, 1977. WF Hoffman, Jr, Exec Dir, 2400 E Devon Ave, Suite 218, Des Plaines, Ill 60018.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Las Vegas, Nev, Oct 20-28, 1977. DL Gilcrest, Exec Dir, 2100 W Harrison St, Chicago 60612.

AMERICAN SOCIETY OF MAXILLOFACIAL SURGEONS, San Francisco, Oct 30-Nov 4, 1977. CA Janda, MD, DDS, Sec, 120 Oakbrook Center Mall, Westchester, Ill 60153.

CENTRAL ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Biloxi, Miss, Oct 6-8, 1977. David G Anderson, MD, Sec-Treas, Women's Hospital, University of Michigan Medical Center, Ann Arbor, Mich 48109.

■ MEDICAL GROUP MANAGEMENT ASSOCIATION, Houston, Oct 9-14, 1977. RV Grant, PhD, Exec Dir, 4101 E Louisiana Ave, Denver 80222.

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO, Phoenix, Ariz, Oct 12-15, 1977. Lucy A Vernetti, MD, 333 W Thomas Rd, Suite 207, Phoenix, Ariz 85013.

NOVEMBER

AMERICAN ACADEMY OF PEDIATRICS, New York, Nov 5-10, 1977. Robert G Frazier, MD, Exec Officer, 1801 Hinman Ave, Evanston, Ill 60201.

AMERICAN ASSOCIATION OF BLOOD BANKS, Atlanta, Nov 11-16, 1977. Lois J James, Asstnt Exec Dir, 1828 L St, NW, Washington, DC 20036.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, New Orleans, Nov 9-13, 1977. Howard Silber, Exec Officer, Box 912, Omaha 68101.

AMERICAN CANCER SOCIETY, INC, New York, Nov 9-11, 1977. Lane W Adams, Exec Vice-pres, 777 Third Ave, New York 10017.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, San Francisco, Nov 8-10, 1977. Arthur Auer, Exec Officer, 3900 Capital City Blvd, Lansing, Mich 48906.

AMERICAN HEART ASSOCIATION, Miami, Nov 28-Dec 2, 1977. William W Moore, Exec Officer, 7320 Greenville Ave, Dallas 75231.

AMERICAN MEDICAL ASSOCIATION, 16th Natl Conference on Physicians and Schools, Chicago, Nov 10-11, 1977. Division of Scientific Activities/Department of Health Education, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL WOMEN'S ASSOCIATION, Denver, Nov 30-Dec 4, 1977. Lorraine Loesel, Exec Officer, 1740 Broadway, New York 10019.

AMERICAN SOCIETY OF CYTOLOGY, Toronto, Nov 1-5, 1977. Warren R Lang, MD, Sec-Treas, Health Sciences Center, 130 S Ninth St, Suite 10006, Philadelphia 19107.

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES, Washington, DC, Nov 27-Dec 1, 1977. 10605 Concord St, Suite 306, Kensington, Md 20795.

■ SOUTHERN MEDICAL ASSOCIATION, Section on Ophthalmology, Dallas, Nov 6-9, 1977. William H Coles, MD, Section Sec, Dept of Ophthalmology, 80 Barre St, Charleston, SC 29401.

■ TEXAS MEDICAL ASSOCIATION, House of Delegates, Austin, Tex, Nov 12-13, 1977. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.

DECEMBER

■ AMERICAN ACADEMY OF DERMATOLOGY, Dallas, Dec 3-8, 1977. Bradford W Claxton, Exec Dir, 820 Davis St, Evanston, Ill 60201.

AMERICAN ASSOCIATION OF GYNECOLOGICAL LAPAROSCOPISTS, San Francisco, Dec 7-11, 1977. Jordan M Phillips, Exec Officer, 11239 S Lakewood Blvd, Downey, Calif 90241.

■ AMERICAN COLLEGE OF CHEMOSURGERY, Dallas, December 1977. GR Mikhail, MD, Sec-Treas, 2 Elmsleigh Lane, Grosse Pointe, Mich 48230.

AMERICAN MEDICAL ASSOCIATION, Chicago, Dec 4-7, 1977. 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL TENNIS ASSOCIATION, Palm Springs, Calif, Dec 7-11, 1977. WJ Drake, Exec Dir, Box 183, Alton, Ill 62002.

SOUTHERN SURGICAL ASSOCIATION, Hot Springs, Va, Dec 5-7, 1977. WR Warren, MD, Sec, Emory University Hospital, Atlanta 30322.

■ SOUTHWESTERN GYNECOLOGIC ASSEMBLY, Dallas, Dec 1-3, 1977. 3630 Noble Ave, Dallas 75204.

JANUARY

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Bal Harbour, Fla, Jan 28-Feb 3, 1978. Ms M Trueblood, Sec, 6 N Michigan Ave, Chicago 60602.

SOCIETY OF THORACIC SURGEONS, Orlando, Fla, Jan 23-25, 1978. 111 E Wacker Dr, Chicago, 60601.

■ TEXAS MEDICAL ASSOCIATION, Winter Conference, Austin, Tex, Jan 20-22, 1978. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.

■ UNITED CEREBRAL PALSY ASSOCIATION OF TEXAS, INC, Austin, Tex, Jan 14-15, 1978. San Jacinto Bldg, Suite 201, Ninth and San Jacinto, Austin, Tex 78701.

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, Phoenix, Ariz, Feb 25-Mar 1, 1978. Raymond G Slavin, MD, Exec Off, 1402 S Grand, St Louis 63104.

■ AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Dallas, Feb 23-28, 1978. Charles V Heck, MD, Exec Dir, 430 N Michigan Ave, Chicago 60611.

AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS, Key Largo, Fla, Feb 22-26, 1978. RA Straffon, MD, Sec-Treas, 2020 E 93rd St, Cleveland 44106.

AMERICAN COLLEGE OF PSYCHIATRISTS, New Orleans, Feb 8-12, 1978. JC Nemiah, MD, Admn Officer, Beth Israel Hospital, 330 Brookline Ave, Boston 02215.

■ AMERICAN COLLEGE OF SURGEONS, SOUTH TEXAS CHAPTER, Houston, Feb 2-4, 1978. Peter B Fisher, MD, Pres, 615 Medical Towers Bldg, Houston 77025.

AMERICAN GROUP PSYCHOTHERAPY ASSOCIATION, New Orleans, Feb 21-25, 1978. Ms MS Block, Exec Sec, 1995 Broadway, 14th Fl, New York 10023.

■ AMERICAN ORTHOPAEDIC FOOT SOCIETY, Dallas, Feb 22-23, 1978. RA Mann, MD, Sec, 3334 Webster St, Oakland, Calif 94609.

■ AMERICAN SOCIETY FOR SURGERY OF THE HAND, Dallas, Feb 19-24, 1978. RJ Smith, MD, Sec, Dept of Orthopaedics, Massachusetts General Hospital, Fruit St, Boston 02114.

ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL INSTRUMENTATION, Chicago, Feb 25-Mar 1, 1978. MJ Miller, JD, Exec Dir, 1901 N Ft Myer Dr, Suite 602, Arlington, Va 22209.

ASSOCIATION OF CONVALESCENT HOMES AND HOSPITALS FOR ASTHMATIC CHILDREN, Phoenix, Ariz, Feb 23-24, 1978. I Friedman, Exec Vice-pres, Spring Valley Rd, Ossining, NY 10562.

SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, Jackson, Miss, Feb 21-24, 1978. Marti Ginest, Exec Sec, 4300 N Lamar Blvd, Austin, Tex 78756.

WESTERN MEDICAL SOCIETY FOR THE STUDY OF TRAUMA, Steamboat Springs, Colo, Feb 18-25, 1978. AA Torre, MD, Sec-Treas, 3797 E Shields, Fresno, Calif 93728.

Kefzol®
cefazolin sodium
Ampoules, equivalent to 500 mg., 1 Gm.,
and 10 Gm. of cefazolin
KEFZOL®
STERILE
CEFAZOLIN
SODIUM
CRYSTALLINE
Equivalent to
10 Gm.
PHARMACY
BULK PACKAGE
KEFZOL
500 mg.
KEFZOL
1 Gm.
Lilly
Additional information available
to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206
600112

Proper use of antibiotics

James W. Smith, MD

The proper use of antibiotics requires knowledge of microbiologic and pharmacologic principles. Characteristics of various groups of antibiotics and potential alternative agents, as well as organisms to which they are sensitive, must be evaluated continuously. Factors affecting absorption, excretion, and penetration of antibiotics are presented to guide practicing physicians in appropriate use. Conditions are presented for which the duration of drug needs to be tailored, including certain infections requiring longer than usual duration of therapy, as well as conditions such as prophylaxis of surgical procedures for which a short course of therapy is indicated.

The proper use of antibiotics entails knowledge of microbiologic and pharmacologic principles. In the use of antibiotics certain general principles remain valid.

Penicillins

Penicillin and the semisynthetic derivatives remain the most effective agents for infections with gram-positive bacteria. Penicillin is just as effective against the pneumococcus, streptococcus and anaerobic gram-positive organisms as it was when it was introduced.[1] However, there has been a relative increase in resistance to penicillin by *Neisseria gonorrhoeae* and the aerobic gram-negative bacilli. The penicillinase-resistant antibiotics such as methicillin and oxacillin remain the agents of choice for staphylococcal infections. In addition, derivatives such as ampicillin or amoxicillin are quite effective against gram-negative bacilli, especially *Escherichia coli*, *Proteus* species, and *Salmonella*, and carbenicillin is effective in high doses against *Pseudomonas* species and *Enterobacter*, particularly in leukopenic patients. Thus, penicillin or its derivatives remain the treatment of choice for most skin and respiratory tract infections and certain serious infections such as subacute bacterial endocarditis and bacterial meningitis in adults.[2,3]

From the Medical Service, Veterans Administration Hospital, Dallas, TX 75216, and Department of Internal Medicine, The University of Texas Southwestern Medical School, Dallas, TX 75235.

Cephalosporins and Clindamycin[4]

The antimicrobial agents are not uniformly effective against all penicillin-sensitive organisms. The cephalosporins are not as effective against anaerobic organisms, *Hemophilus* species, or *Enterococcus* as is either penicillin or ampicillin.[1,5,6] Clindamycin is the treatment of choice for infections caused by anaerobic organisms,[6] but is not an alternative agent to penicillin in treatment of infections due to *Neisseria meningitidis*, *N gonorrhoeae*, or *Streptococcus fecalis*.[5,7] Therefore, these are alternative agents for some, but not all, of the infections occurring in individuals who are allergic to penicillin. Although there is some cross-reactivity between cephalosporin and penicillin, clinical experience has demonstrated that cephalosporin derivatives are safe for persons allergic to penicillin. However, the use of clindamycin should be limited to very specific indications because pseudomembranous colitis is a life-threatening, albeit rare, complication.[8]

Hospital-associated Infections

Organisms which induce infections within the hospital environment are resistant to many antibiotics.[9] Although gentamicin has been the recommended choice for hospital-

acquired gram-negative infections, hospital epidemics have been reported with gentamicin-resistant *Klebsiella* and *Proteus rettgeri*.[10] In these situations, infection control measures were necessary to interrupt the epidemic. If an organism has been isolated and is resistant to gentamicin, one can utilize either tobramycin for *Pseudomonas* or amikacin for *Klebsiella* species.[11,12] Each of these agents has similar toxic side effects, particularly nephrotoxicity and ototoxicity; consequently, if these agents are used, the physician must monitor results of renal function tests and blood levels of the drug, if available.*[13] If an aminoglycoside is utilized empirically, then antimicrobial sensitivities can be used to determine whether or not a less toxic antibiotic could be continued for the remainder of the treatment course.

Cost to the Patient

In life-threatening situations, the cost of antimicrobial agents is a minor aspect of care. However, use of effective but less costly antibiotics can be part of a physician's medical practice. When the cost of antibiotics was surveyed in the Dallas area, (1) hospital pharmacies were found to charge more than town pharmacies, (2) generic drugs were not available although Medicare and Medicaid patients are to be prescribed these rather than the trade name antibiotics, and (3) alternative agents for penicillin-G were considerably higher.[14] Specifically, cephalexin and clindamycin were ten times more costly than penicillin-G, and both doxycycline and minocycline, the new one-a-day tetracyclines, were ten times more costly than generic tetracycline. Hence, unless clinical experience or laboratory tests indicate clear superiority of the more expensive drug, then the first choice should be penicillin or tetracycline. An educational program designed to encourage use of less expensive drugs was moderately successful at our hospital.[15]

Pharmacological Considerations

Certain pharmacologic principles relating to absorption and excretion of antibiotics must be kept in mind when administering antibiotics. Many antibiotics, including penicillin-G, clovacillin, erythromycin, and tetracycline (and its derivatives) have decreased absorption when taken with food,[16] therefore, patients should be instructed to take these antibiotics at least 30 minutes before meals or two hours following meals. Any divalent or trivalent cation (antacids, iron) interferes with the absorption of tetracycline.[16-18] In addition, antacids interfere with the absorption of isoniazid. Kaolin, a preparation administered for diarrhea, interferes with the absorption of all drugs. Patients with achlorhydria (such as the elderly patient or the premature infant) have increased absorption of antibiotics since gastric acid is not present to interfere with absorption. If, in addition, renal function is also impaired, then the antibiotic may have a prolonged half life[16] which could result in toxicity, as can occur with tetracycline. Very sick children with severe diarrhea caused by shigellosis will not absorb antibiotics, so drugs must be administered parenterally.[19]

Penetration of antibiotics into certain body spaces may present problems in the

*A complete list of indications, dosage schedules, and toxicity for antibiotics is listed in *Guide to Antimicrobial Therapy*, which can be obtained for $2 from Jay P. Sanford, MD, School of Medicine, USUHS, 6917 Arlington Road, Bethesda, MD 20014, or for $2.09 from Student Stores, University of Texas Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas, TX 75235.

therapy for certain infections. Most antibiotics penetrate pleural, peritoneal, and synovial spaces quite readily. However, antibiotics do not penetrate very well into the central nervous system, particularly the meninges,[20] or into the prostate.[21] One can achieve adequate therapeutic levels of penicillin and ampicillin in the inflamed meninges, but one rarely achieves sufficient levels of either tetracycline, lincomycin, cephalosporins, or aminoglycosides. Therefore, in the treatment of meningitis, penicillin is the drug of choice for adults and ampicillin for children; chloramphenicol is the alternative drug for patients allergic to penicillin or in patients with *Hemophilus influenzae* resistant to ampicillin.[2] Few antimicrobial agents penetrate the prostate gland, although recently, the newly introduced fixed-combination agent (trimethoprim-sulfa-methoxazole) was found to be efficacious in the treatment of prostatitis.[21]

It has been debated for years whether bactericidal antibiotics, such as the penicillin derivatives, are more effective than bacteriostatic antibiotics. The efficacy of bactericidal antibiotics has been clearly demonstrated in the treatment of endocarditis[3] and in the treatment of gram-negative sepsis in leukopenic patients with rapidly fatal illnesses[22] such as leukemia, where agents such as carbenicillin are more effective than aminoglycosides. The mortality from gram-negative sepsis in patients with nonfatal or ultimately fatal diseases does not depend on the use of bactericidal antimicrobial agents, but rather upon the use of appropriate antibiotics.[22] The agent of choice still is gentamicin despite its significant toxicity.[9]

The use of local antibiotics for certain conditions has been emphasized, but one must be cautious about their use. Irrigation with antibiotic solutions is a common practice following surgical drainage; however, the most critical aspect of treating purulent collections is adequate drainage. If an infection is present, one must obtain the appropriate cultures, drain as extensively as necessary, and administer parenteral antibiotics, basing the choice upon smears, clinical information, and cultures, when available. One should not rely on long-term irrigation with antibiotic solutions, since resistance to agents in fluid may occur. In addition, local antibiotics have not been as effective as systemic antibiotics in the treatment of certain skin infections. Although many physicians rely upon antibiotic creams containing bacitracin and neomycin for the treatment of impetigo, the greatest response rate occurs with the intramuscular administration of benzathine penicillin.[23]

The duration of therapy needs to be prolonged for some infections, such as osteomyelitis, four to six weeks; brain abscess caused by anaerobic organisms, four to six weeks; and infections of the prostate, two to six months. Although it has been recommended that the treatment of staphylococcal or enterococcal endocarditis should be given for at least six weeks, both the short-term and long-term complications probably relate to the pretreatment period, and relapses are not prevented by extending treatment for more than four weeks. If bone infections recur, successful therapy can be achieved with courses of treatment continuing for six months or longer.

Antibiotics as Prophylactic Agents

Antibiotics often are used as prophylactic agents to insure "clean" surgical proced-

ures in situations where their use cannot be justified. This practice constitutes the principal misuse of antibiotics.[15] The appropriate use of antibiotics in surgical procedures requires that the antibiotic be administered before the operation so that the drug is present in the tissue.[24] The antibiotic is then given during the procedure (if it is a prolonged operation) and in the recovery room, but there is no need to continue administering antibiotics after this time. It would be acceptable for surgeons to continue such medication for at least 48 hours, but extending it for seven to ten days cannot be justified.

Situations in which prophylactic use of antibiotics has been demonstrated to be of value[14] include: dental extraction in a person with a cardiac lesion, best accomplished with the combination of penicillin and streptomycin; mandibular fractures with penetration of oral mucosa, penicillin; penetrating abdominal wound, either penicillin and tetracycline or cephalosporins plus clindamycin; high-risk biliary tract surgery, penicillin and streptomycin; labor where membrane was ruptured more than 24 hours, and vaginal hysterectomy, tetracycline; and animal bites, penicillin since the microbial flora (Fig 1) are all highly susceptible to penicillin. In addition to adequate irrigation of the bite and avoidance of sutures, penicillin should be administered for up to 7 days.

1. Microbial flora of bites.

Animal	Organism	Antibiotic
Dog, Cat	*Pasteurella multocida*	Penicillin G
Rat	*Streptobacillus moniliformis* *Spirallum minus*	Penicillin G
Snake	*Clostridia*	Penicillin G
Human	*Eikenella corrodens*	Penicillin G

Although the use previously has been debatable, it is generally accepted now that prophylactic administration of antibiotics (neomycin and tetracycline given orally) is effective in preventing wound infections and septicemia in patients having colon surgery.[14] In other operative procedures, in which infection develops in less than 1% of the cases, it is difficult to prove that antibiotics are effective prophylactics. Examples are open heart surgery, placement of hip prosthesis, and aortofemoral bypasses. Most surgeons pretreat with either cephalosporin or nafcillin since infections are difficult to manage if they do develop. In certain situations, for example, basilar skull fractures or wounds acquired during tornadoes, antibiotic prophylaxis is of little benefit because a multitude of organisms with variable antimicrobial sensitivities are introduced.

Conclusion

The appropriate use of antimicrobial agents must be based on knowledge of microbiological and pharmacological aspects of the infection and its treatment. One must follow carefully the antimicrobial sensitivity patterns of organisms within one's own hospital, and stay abreast of current published data on sensitivities of specific bacteria. The resistance patterns of various organisms can be expected to change, and physicians must be alert continuously to the proper choice of antibiotics for properly diagnosed infections.

References

1. Sabath LD, Stumpf LL, Wallace SJ, et al: Susceptibility of *Diplococcus pneumoniae, Haemophilus influen-*

zae, and *Neisseria meningitidis* to 23 antibiotics. Antimicrob Agents Chemother 10:53-56, 1970.

2. Sanford JP, Barnett JA: Chronic meningitis—a clinical dilemma. Postgrad Med 50(3):139-143, (Sept) 1971.

3. Weinstein L, Schlesinger J: Treatment of infective endocarditis, 1973. Prog Card Dis 16:275-302, 1973.

4. Hamilton-Miler JM, Brumfitt W: Editorial: Whither the cephalosporins? J Infect Dis 130:81-84, 1974.

5. Moellering RC Jr, Watson BK, Kunz LJ: Endocarditis due to group D streptococci. Comparison of disease caused by *Streptococcus bovis* with that produced by the enterococci. Am J Med 57:239-250, 1974.

6. Gorbach SL, Bartlett JG: Anaerobic infections (part III). N Engl J Med 290:1289-1294, 1974.

7. Gonorrhea. CDC recommended treatment schedules, 1974. Morbidity and Mortality 23:341-342, 1974.

8. Lincomycin and clindamycin colitis. Br Med J 4:65-66, 1974.

9. Sanford JP: Generalized gram-negative bacillary infections. J R Coll Physicians Lond 6:189-193, 1972.

10. Schaberg DR, Weinstein RA, Stamm WE: Epidemics of nosocomial urinary tract infection caused by multiply resistant gram-negative bacilli: epidemiology and control. J Inf Dis 133:363-366, 1976.

11. Anderson EL, Gramling PK, Vestal PR, et al: Susceptibility of *Pseudomonas aeruginosa* to tobramycin or gentamicin alone and combined with carbenicillin. Antimicrob Agents Chemother 8:300-304, 1975.

12. Meyer RD, Lewis RP, Carmalt ED, et al: Amikacin therapy for serious gram-negative bacillary infections. Ann Intern Med 83:790-800, 1975.

13. Goodman EL, Van Gelder J, Holmes R, et al: Prospective comparative study of variable dosage and variable frequency regimens for administration of gentamicin. Antimicrob Agents Chemother 8:434-438, 1975.

14. Smith JW, Jones SR: An education program for the rational use of antimicrobial agents. South Med J 70(2):215-218, 221, 1977.

15. Jones SR, Barks J, Bratton T, et al: The effect of an educational program upon antibiotic use. Am J Med Sci 273:79-85, 1977.

16. Weinstein L, Dalton AC: Host determinants of response to antimicrobial agents. N Engl J Med 279:524-531, 1968.

17. Waisbren BA, Hueckel JS: Reduced absorption of aureomycin caused by aluminum hydroxide gel (Amphojel). Proc Soc Exper Biol Med 73:73-74, 1950.

18. Neuvonen PJ, Gothoni G, Hackman R, et al: Interference of iron with the absorption of tetracyclines in man. Br Med J 4:532-534, 1970.

19. Haltalin KC, Nelson JD, Kusmiesz HT: Comparative efficacy of nalidixic acid and ampicillin for severe shigellosis. Arch Dis Child 48:305-312, 1973.

20. Southern PM Jr, Sanford JP: Meningococcal meningitis—Suboptimal response to cephalothin therapy. N Engl J Med 280:1163-1165, 1969.

21. Meares EM Jr: Prostatitis. Observations on activity of trimethoprim-sulfamethoxazole on the prostate. J Infect Dis 128:S679-685, 1973.

22. McCabe WR: Antibiotics and endotoxic shock. Bull NY Acad Med 51:1084-1095, 1975.

23. Dillon HC Jr, Derrick CW Jr: Streptococcal complications: the outlook for prevention. Hosp Prac 7(9):93-101, 1972.

24. Burke JF: The effective period of preventive antibiotic action in experimental incisions and dermal lesions. Surg 50:161-168, 1961.

James W. Smith, MD, General Medical Research (111D), VA Hospital, 4500 South Lancaster Road, Dallas, TX 75216.

Computed cranial tomography: experience at The University of Texas Medical Branch

Mohammad Sarwar, MD

Since the clinical introduction of computed cranial tomography (CT scan) in 1973,[1] this radiological diagnostic modality has been widely used and clinically accepted in the diagnosis of neurological diseases. Numerous published reports[2-13] bear out the efficacy of CT scan in the detection of intracranial abnormalities. This article reviews the CT scans made during one year at The University of Texas Medical Branch, Galveston, and reiterates the extreme usefulness of CT scan in the investigation of neurological diseases. Also, it offers a scheme (Fig 1) which might be used in the radiological investigation of neurological diseases. The pivotal role of CT scan is stressed.

Material and Methods

All cases from July 1975 (when the EMI scanner first became operational) until June 30, 1976, were reviewed—about 2,200 CT scans. A neurological or neurosurgical consultation is not mandatory before requesting a CT scan. Unless an orbital disorder is suspected, we prefer that the first CT scan be made at an axis of 15-20° along the canthomeatal line. Usually three, and if needed, four scans (eight slices) are obtained. All the scans are supervised by the neuroradiologist. If the plain CT scan suggests an abnormality, an additional CT scan is done after intravenous administration of iodinated contrast material* (30% meglumine diatrizoate, 100-150 cc, is given rapidly and then 50-100 cc slowly to maintain a constant blood concentration). All patients with suspected sellar, parasellar, and posterior fossa tumors and arteriovenous malformation are routinely given intravenous iodinated contrast material.

Since patient movement considerably impairs the diagnostic quality of the CT scan, sedatives are administered. Valium (diazepam) is useful for adults; for children, I prefer intramuscular administration of droperidol, 0.1-0.15 mg/kg and Demerol (meperidine), 1 mg/lb, (other combinations of drugs can be used) about 30-45 minutes before the CT scan. It has not always been possible but is highly desirable to arrange general anesthesia for trauma patients and for those patients, especially infants and children, in whom routine sedation has failed.

Both the cathode-ray oscilloscope and Polaroid† images are utilized to reach a radiological diagnosis. We now routinely obtain EMI printouts for characterization of the pathologic lesion.

A summary of the lesions is indicated in Fig 2. Diagnoses have been confirmed by surgery and/or necropsy, cerebral angiography, air studies (pneumoencephalography and ventriculography), skull radiography (plain films and tomography), and radionuclide scanning. Where the diagnosis has not been confirmed by aforementioned methods, clinical correlation and other appropriate investigations have been considered enough evidence to reach a specific diagnosis.

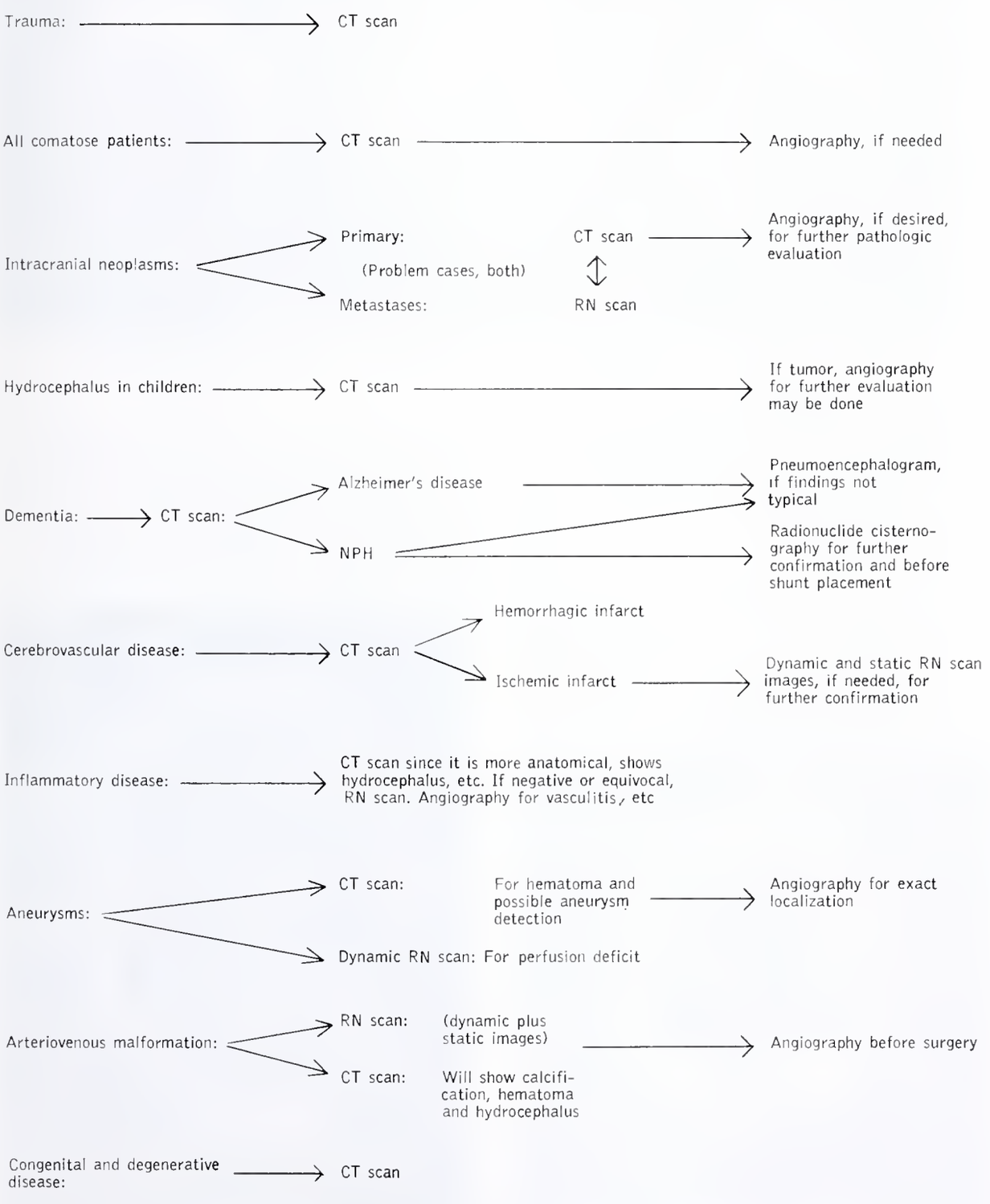
Discussion

The revolutionary and salutary role played by the CT scan in the radiologic investigation of neurological diseases is widely recognized. Besides providing anatomical location of a lesion, the CT scan has proved to be extremely efficacious in the study of the pathophysiology, evolution, pro-

*Reno-M-Dip (Squibb).

†By convention, the right side of the Polaroid image (on viewer's right) depicts the right side of the cerebral hemisphere, and vice versa.

1. Proposed Scheme for Neuroradiological Investigation of Neurological Disease



RN scan: Radionuclide scan NPH: Normal pressure hydrocephalus

1.	Intracranial Neoplasms:	
	Supratentorial astrocytomas	26
	Meningiomas (all locations)	20
	Metastases (all locations) (19 were multiple)	25
	Posterior fossa tumors	11
	Sellar, parasellar tumors	13
	Orbital tumors	5
2.	Hematomas:	
	Intracerebral	47
	Extracerebral	26
3.	Cortico-cerebral atrophy	127
4.	Infarcts:	
	Acute	20
	Old	34
5.	Hydrocephalus in children, not secondary to tumor (communicating hydrocephalus (meningitis), aqueductal stenosis, Dandy-Walker cyst, etc)	45
6.	Adult hydrocephalus, not secondary to tumor (ie, NPH, post-traumatic, postsurgical, postinfection, old subarachnoid hemorrhage)	35
7.	Inflammatory disease (cerebritis, abscess, subdural effusion)	19
8.	Porencephalic cysts	15
9.	Arteriovenous malformation	4
10.	Arachnoid cysts	3
11.	Pseudotumor cerebri	1
12.	Unilateral cerebral atrophy	7
13.	Giant aneurysm:	
	Calcified (cavernous carotid)	1
	Noncalcified (middle cerebral artery)	2
14.	Miscellaneous:	
	Degenerative disease	8
	Orbit; trauma (2), neuritis (2), optic atrophy (2)	6
	Agenesis corpus callosum	2
	Tuberous sclerosis	1

*The clinical case material reviewed covered the period July 1975 to June 1976.
NPH: Normal pressure hydrocephalus.

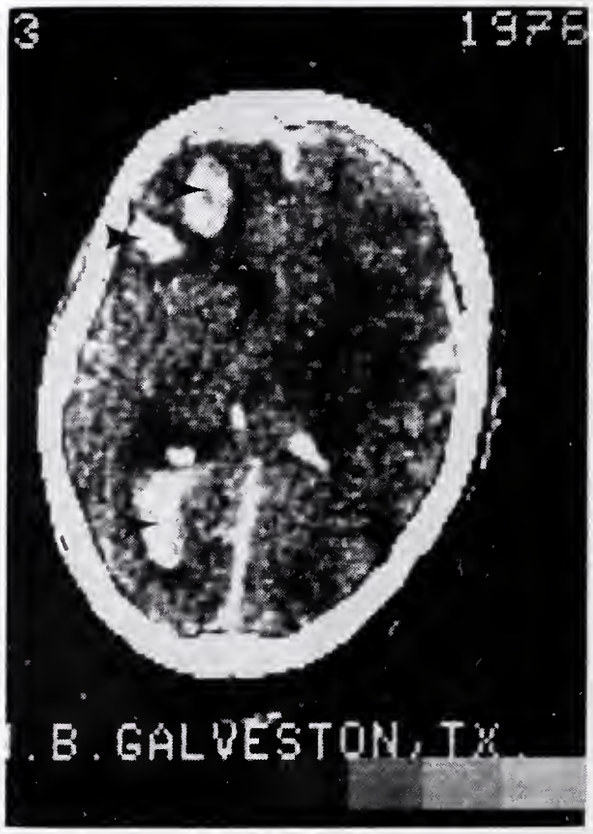
2. Summary of pathologic lesions (430).

gression, and natural history of a number of neurological diseases.

Trauma

Provided a diagnostic CT scan can be obtained in trauma cases, most of the time no additional radiological investigation (for example, cerebral angiography) will be needed. Intracerebral (Fig 3) and acute extracerebral clots can be diagnosed readily. Epidural and acute subdural hematomas usually appear as areas of increased attenuation. These two types of extra-

3. A young patient was involved in an automobile accident. Initially a cerebral angiogram was done and a subdural hematoma diagnosed. After evacuation of the subdural clot, patient did not improve clinically. A CT scan was then performed which showed multiple, small intracerebral clots (arrowheads) distributed in both cerebral hemispheres.

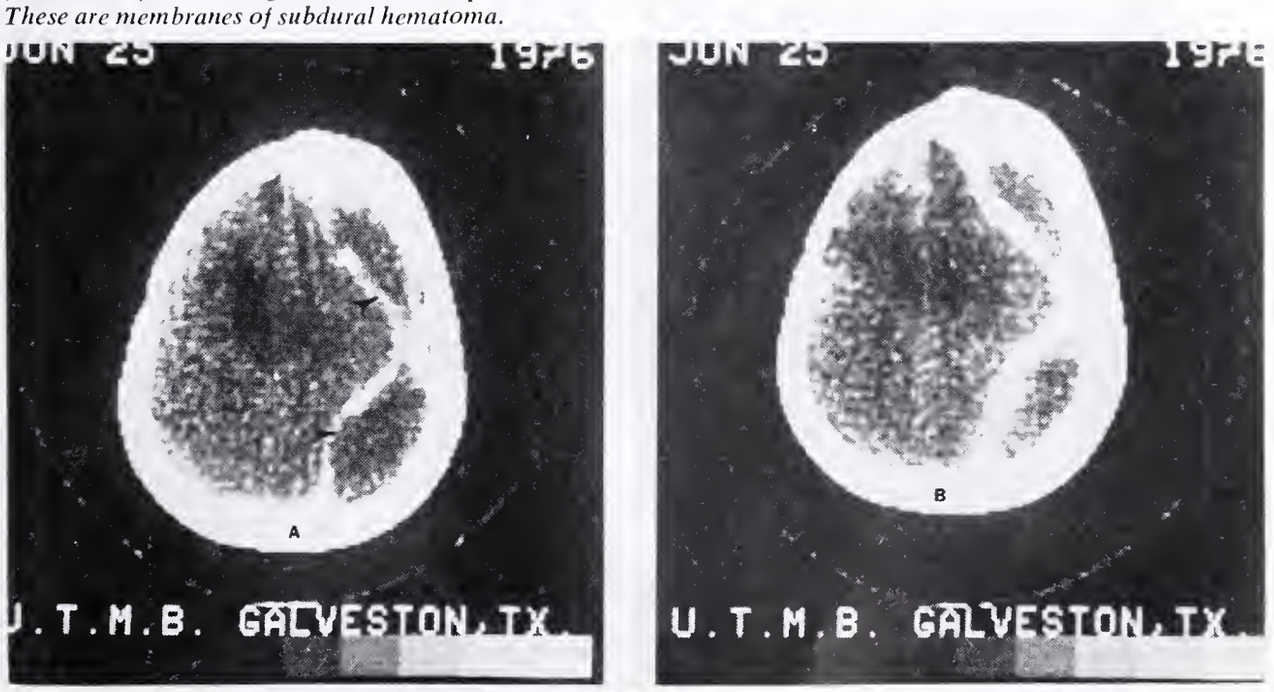


4. Shown are acute and subacute extracerebral clots in three different cases.
(A) A middle-aged man with acute subdural hematoma. Note area of increased attenuation (interrupted line indicates its separation from the bone) located over the surface of the right cerebral hemisphere; its medial border is concave (arrowheads). The right lateral ventricle is compressed and shifted contralaterally. (By permission, Continuing Education For The Family Physician, *vol 6, no 2, Feb, 1977).*

(B) Epidural hematoma. Notice a relatively circumscribed area of increased attenuation (arrows) located underneath the skull fracture (arrowhead). The medical border of the hematoma is convex. The ventricular system is shifted contralaterally.
(C) Subacute subdural hematoma (isodense). A middle-aged man with trauma to skull about 2½ weeks before CT scan. Notice nonvisualization of the left lateral ventricle due to its marked compression by an isodense left-sided subdural hematoma confirmed angiographically and surgically.

5. A 6½-year-old girl with drowsiness, headaches and left-sided weakness. Chronic subdural hematoma.
(A) Notice band-like areas of increased attenuation (arrowheads) over the right cerebral hemisphere. These are membranes of subdural hematoma.

(B) Four hours after administration of iodinated contrast medium, observe marked enhancement of the membranes. This enhancement is due partly to vascularity of these membranes and partly to extravascular extravasation of the contrast medium.

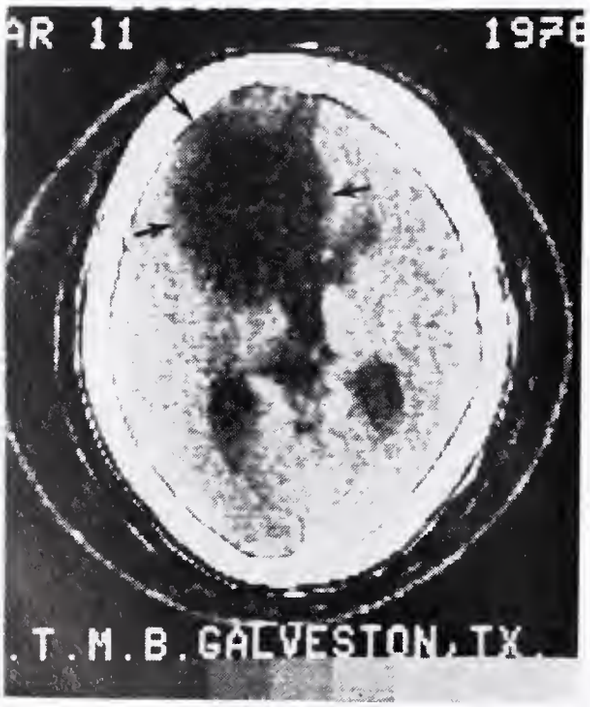


cerebral hematomas can be distinguished by their location, size, and character of the medial border (Fig 4A, B). Subacute (about two weeks after injury) subdural hematomas usually appear isodense (Fig 4C); the chronic ones (about four to six weeks after injury) usually appear as areas of decreased attenuation along the periphery of the brain. Quite frequently, membranes of chronic subdural hematoma can be easily detected; these membranes become more pronounced after administration of iodinated contrast material (Fig 5).

If a patient has bilaterally symmetrical subdural hematomas which are isodense, the CT scan appears to be completely normal. In such cases, in the presence of strong clinical suggestion of subdural hematoma, angiography should be done. Occasionally, ventriculocisternal compression may be the only sign of generalized cerebral edema. Also, if CT scan findings are minimal or negligible in a neurologically devastated patient, angiography may be performed since an unsuspected lesion may be discovered; for example, a carotid occlusion in the neck secondary to blunt trauma.

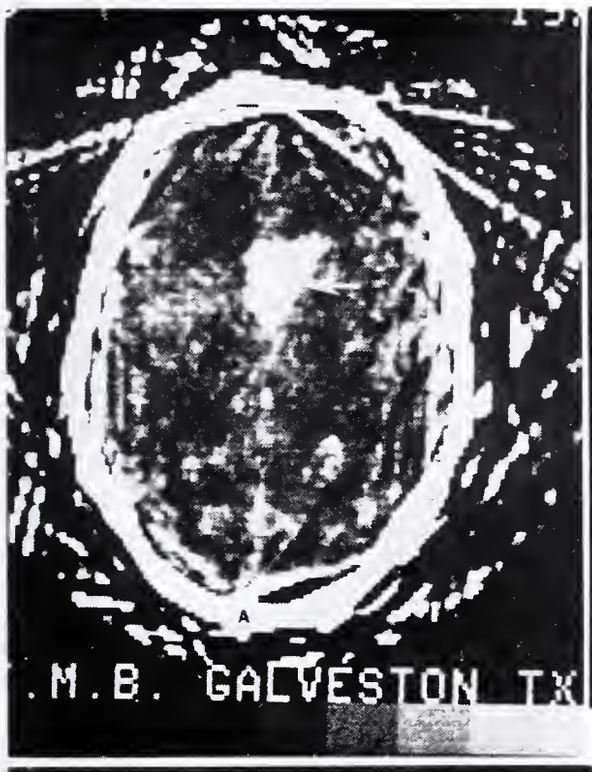
CT scan is very useful in postsurgical evaluation of trauma patients. Post-traumatic sequelae, such as hydrocephalus and cerebral hemiatrophy, can be diagnosed readily. In patients who have had a long-standing unrecognized trauma, porencephaly may come as a total surprise (Fig 6).

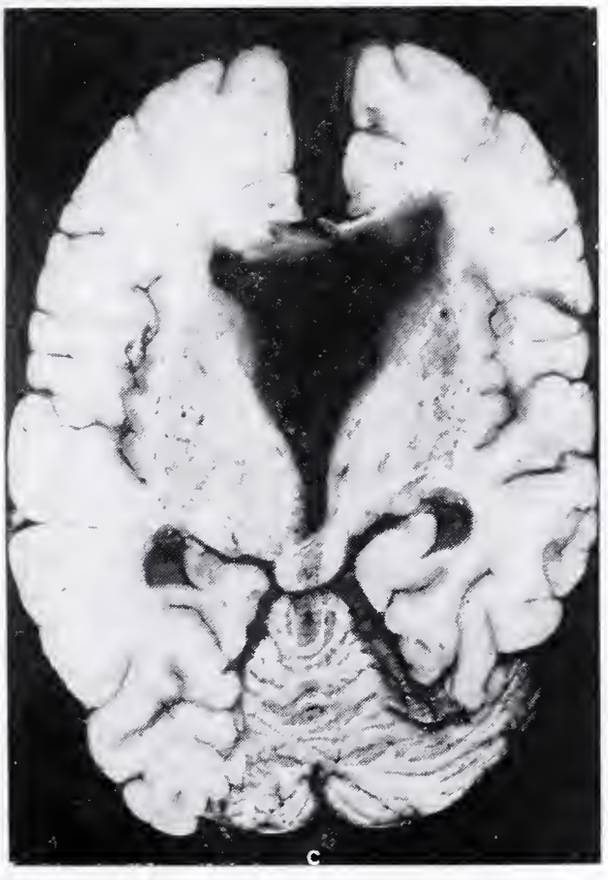
6. A 35-year-old man with complaint of headaches only. He had sustained minor head trauma 11 years before the CT scan. Note large porencephaly (arrows) in the left frontal lobe communicating with the left lateral ventricle.



Intracranial Hemorrhage

CT scan readily identifies lobar, cisternal, and ventricular blood clots.[4,11] Not only does the scan afford an anatomical location of the clot, it frequently provides a clue to its etiology. In patients who have sustained subarachnoid hemorrhage because of rupture of "congenital" aneurysm of the circle of Willis, a particular basal cistern distended with the clot betrays the location of the aneurysm. For example, if there is a rupture of an anterior communicating artery aneurysm, the blood clot would be located in the lower frontal interhemispheric fissure (Fig 7) and/or in neighboring structures. Similarly, in a case of rupture of a middle cerebral artery aneurysm, the clot may be seen to commence at the sylvian fissure (Fig 8). A ruptured arteriovenous malformation is masked by the associated clot. In primary intracerebral hemorrhage (which occasionally may be related to hypertension), the blood clot is usually located deep in the basal ganglia and thalamus and may rupture into the ventricular system.





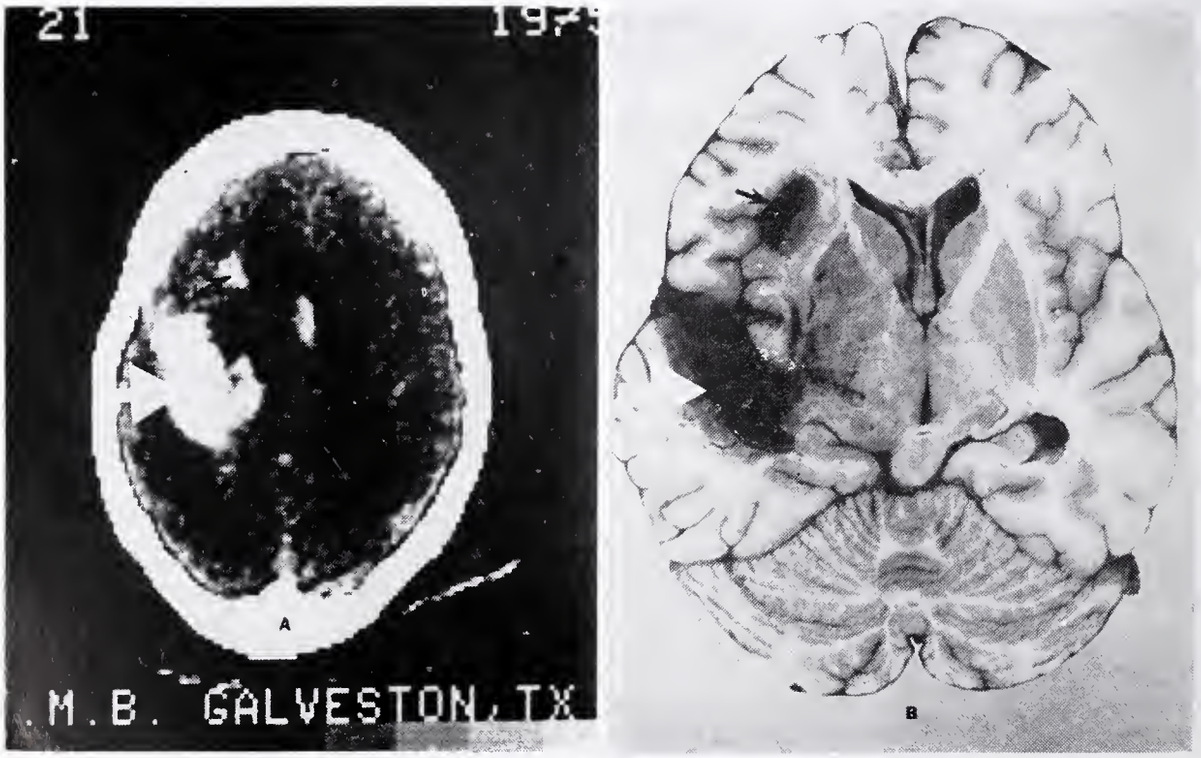
7. A 33-year-old man with sudden coma. Rupture of an anterior communicating artery aneurysm.
(A) Note a large clot extending upwards from the interhemispheric fissure to invaginate between the frontal horns (arrow).
(B) The ruptured, lobulated anterior communicating artery aneurysm is shown on the carotid angiogram (arrow).
(C) Autopsy specimen confirms CT scan findings. (Fig C, courtesy of W. F. McCormick, MD.)

Since patients who have sustained intracerebral hemorrhage are brought to the hospital on an emergency basis, the clotted blood appears as an area of increased attenuation; the EMI units of this clot are usually in the 30s.

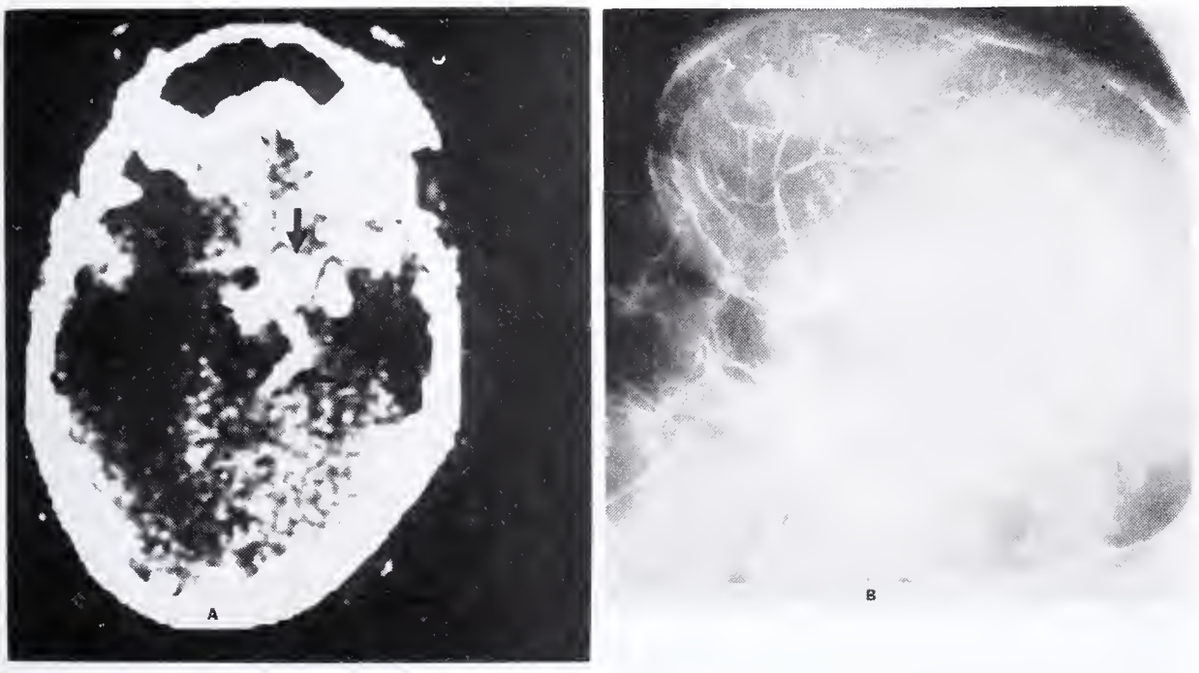
The size and location of the intracerebral hematoma has a great bearing on the outcome and clinical management of a patient. It has been our experience that if the entire ventricular system (lateral ventricles, third ventricle, and fourth ventricle) is full of blood clot, the chance of survival is minimal; of the 17 patients in our series who had an intraventricular clot in addition to a parenchymal or cisternal clot, or both, 14 died. Similarly, for those patients who have deeply located clots (basal ganglia and thalamus), the prognosis is poor; surgical evacuation of these hematomas usually is not helpful. It has been estimated by Steiner and associates[12] that "for intracerebral and intraventricular hemorrhage, the lethal volume corresponded to about 8 percent and 16 percent of the intracranial volume, respectively."

Whereas small cisternal clots can be easily seen on the CT scan, they can be easily missed on an arteriogram (Fig 9). In patients who have multiple intracranial aneurysms, one can usually predict the symptomatic aneurysm accurately; this aneurysm will be the one located in the neighborhood of the basal cistern distended with clot. Although an aneurysm at the base of the brain can be seen after the patient is given iodinated contrast mate-

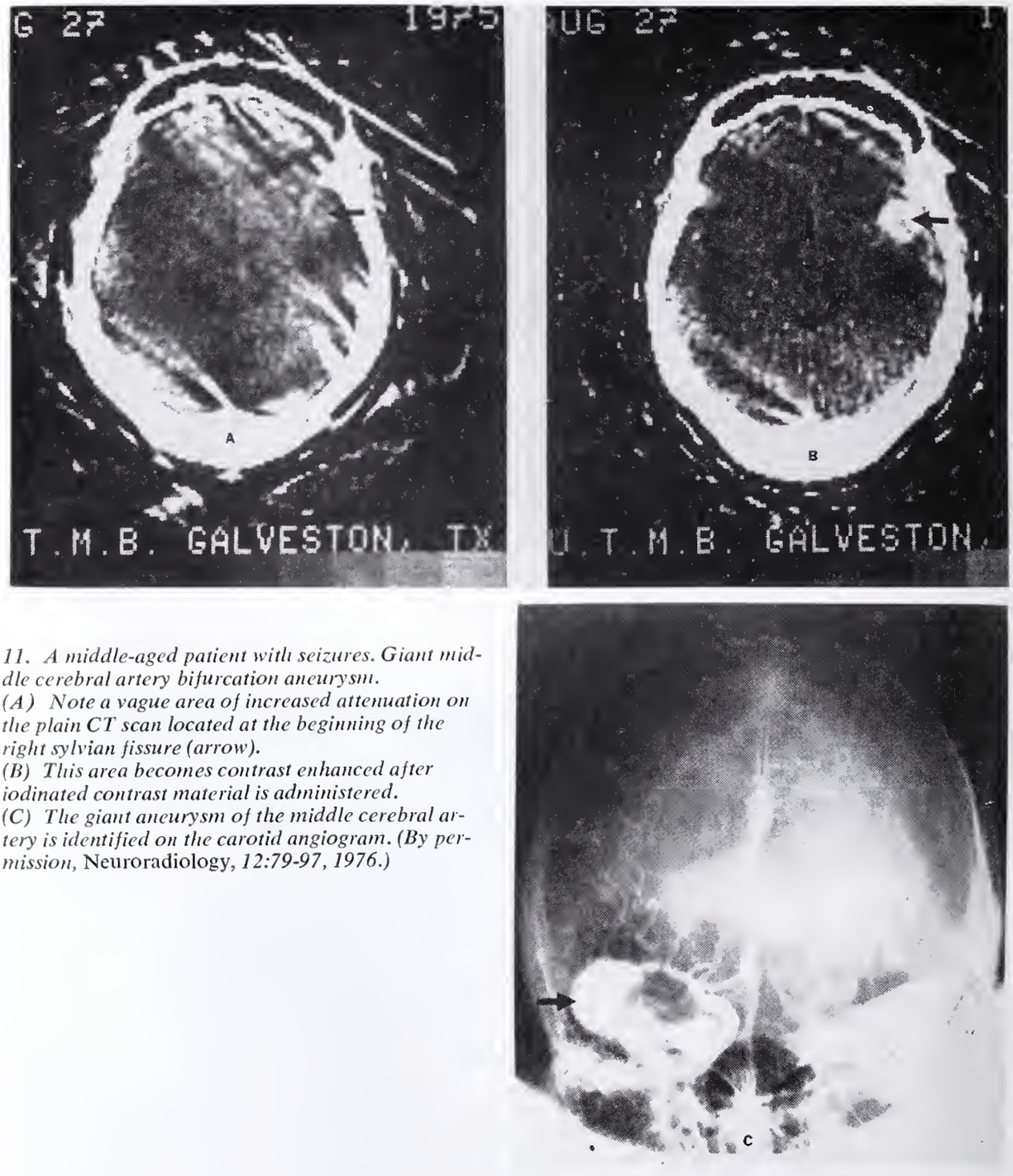
8. A middle-aged patient with rupture of left middle cerebral artery bifurcation aneurysm. Note that the hematoma is lying mainly in the distended left sylvian fissure (white arrow). Correspondence of CT scan and autopsy findings is noteworthy. (Fig B, courtesy of W. F. McCormick, MD.)



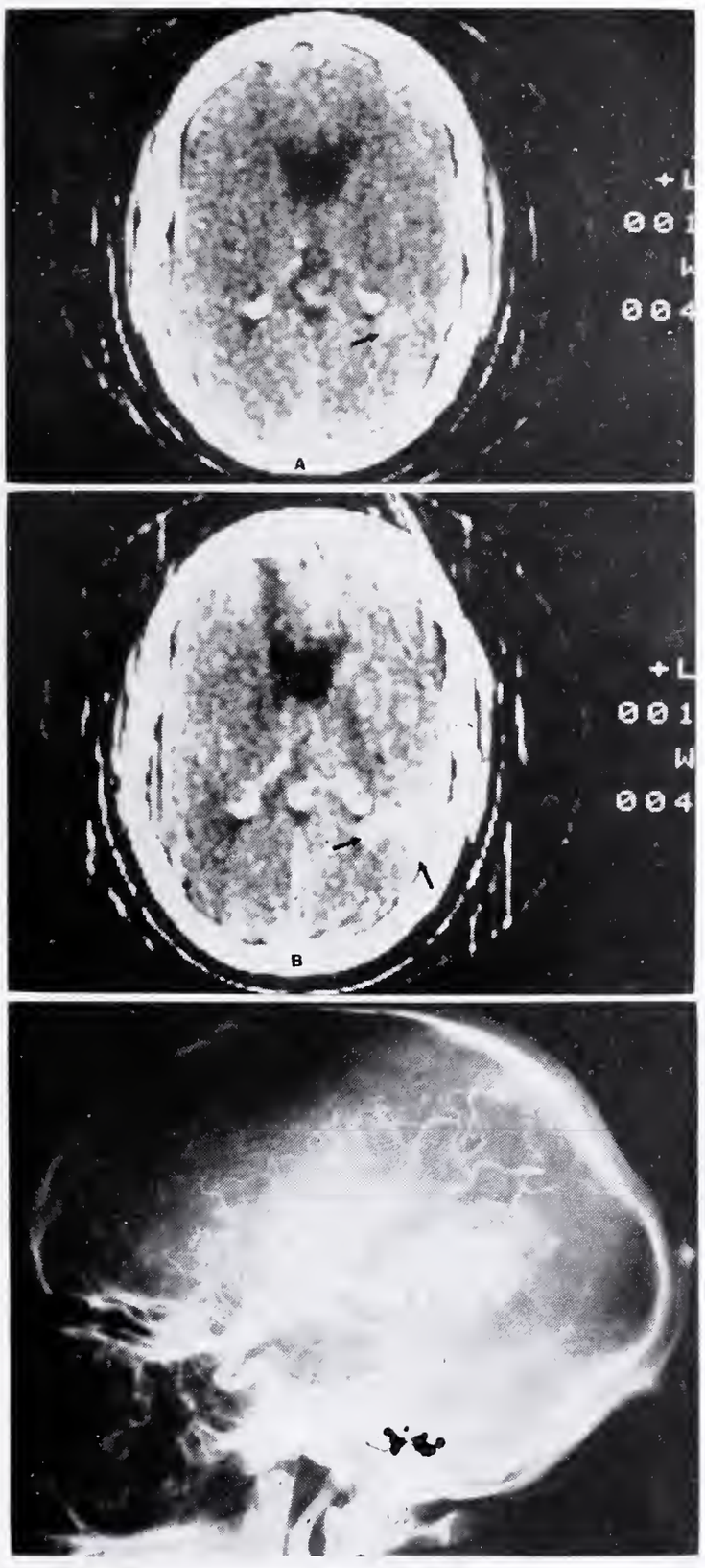
9. Rupture of a probable right internal carotid artery bifurcation aneurysm.
(A) Note that the basal cisterns on the right are full of the clot (arrows).
(B) The arteriogram is totally unrevealing. This case illustrates the superiority of CT scan in the demonstration of basal cisternal clots. Ruptured aneurysm of circle of Willis can be easily detected on CT scan.



10. A newborn premature infant with intraventricular hemorrhage. Note close correlation of the intraventricular hemorrhage as revealed on CT scan (arrows) and confirmed at autopsy (arrowheads). (Fig B, courtesy of W. F. McCormick, MD.)



11. A middle-aged patient with seizures. Giant middle cerebral artery bifurcation aneurysm.
(A) Note a vague area of increased attenuation on the plain CT scan located at the beginning of the right sylvian fissure (arrow).
(B) This area becomes contrast enhanced after iodinated contrast material is administered.
(C) The giant aneurysm of the middle cerebral artery is identified on the carotid angiogram. (By permission, Neuroradiology, *12:79-97, 1976.)*



12. A 50-year-old man with headaches and fever. Arteriovenous malformation. On plain CT sean (A), note a vague area of inereased attenuation (arrow) near the right trigone. This area becomes quite pronounced on a contrast CT scan (arrows in B). Note also serpiginous dilated vessels in the neighborhood. The arteriovenous malformation is confirmed on the carotid arteriogram (C).

rial, cerebral angiography is certainly needed for exact anatomical delineation and localization of the aneurysm before surgical procedure.

It is our impression that the CT scan can be very helpful in demonstration of intraventricular and paraventricular hemorrhage in premature infants (Fig 10).

Intracranial Aneurysms and Arteriovenous Malformations

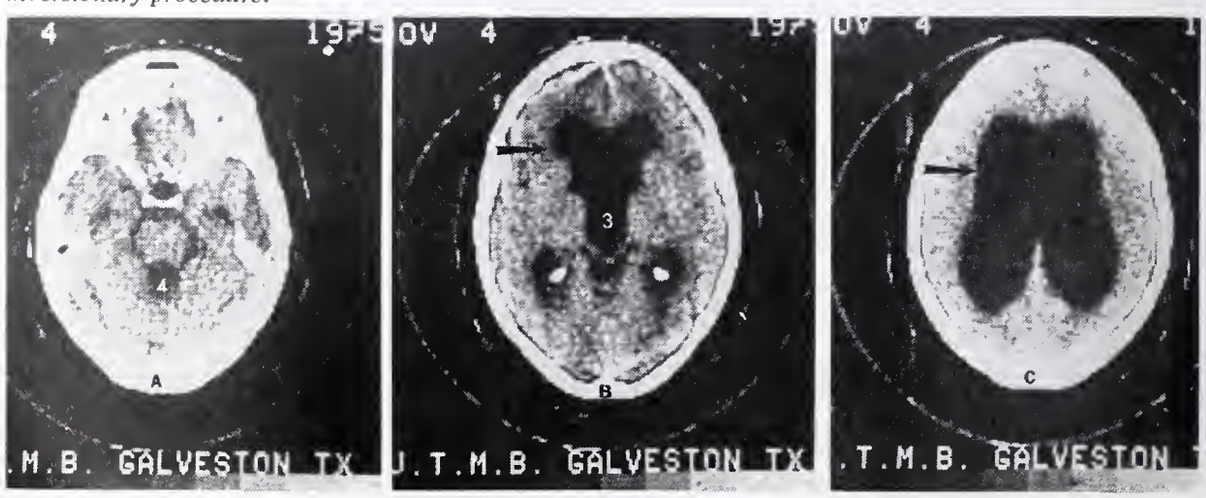
The resolution of the CT scan is such that the symptomatic aneurysms (which usually are less than 1 cm in their greatest dimension) cannot be easily detected; their presence might be suggested by the cisternal clot,[4] (Figs 7-9) or they might be detected after the patient is given iodinated contrast material. However, a giant aneurysm can be identified (Fig 11). Calcification can be seen better on the CT scan than on the skull film, and microcalcifications in an arteriovenous malformation appear as small speckled areas of increased attenuation. The serpiginous nature of the lesion can become apparent after the patient is given iodinated contrast material (Fig 12). An arteriovenous malformation which has ruptured and caused a lobar hematoma cannot be detected as such.

Hydrocephalus

The CT scan is ideal for investigation of hydrocephalus, and nontumoral hydrocephalus is covered in this section.

In adults, the main differentiation which needs to be made is between the so-called normal pressure hydrocephalus (communicating hydrocephalus) and corticocerebral atrophy (Alzheimer's disease). In the so-called "normal pressure hydrocephalus," there is considerable enlargement of the lateral ventricles; the third ventricle is also usually enlarged as is the fourth ventricle (Fig 13). The cerebral sulci are enlarged minimally if at all. This diagnosis can be confirmed by radioisotope cisternography before a shunt placement is contemplated. On the other hand, in corti-

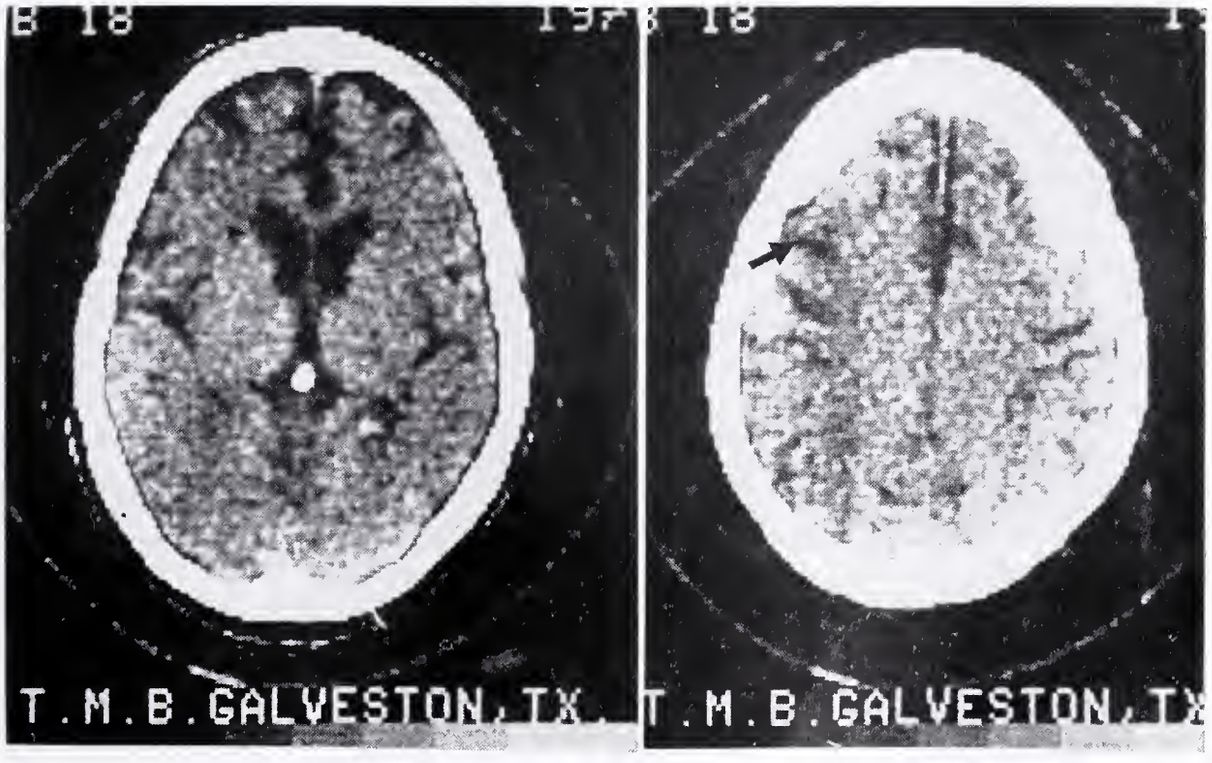
13. A 66-year-old woman with "dementia" and ataxia. Normal pressure hydrocephalus (NPH). Note enlargement of the fourth (4), third (3) and lateral ventricles (arrows). Cerebral sulci are not widened. A pneumoencephalogram confirmed CT scan findings. Radionuclide cisternography is recommended for confirmation of CT scan findings of NPH and before contemplating ventricular diversionary procedure.



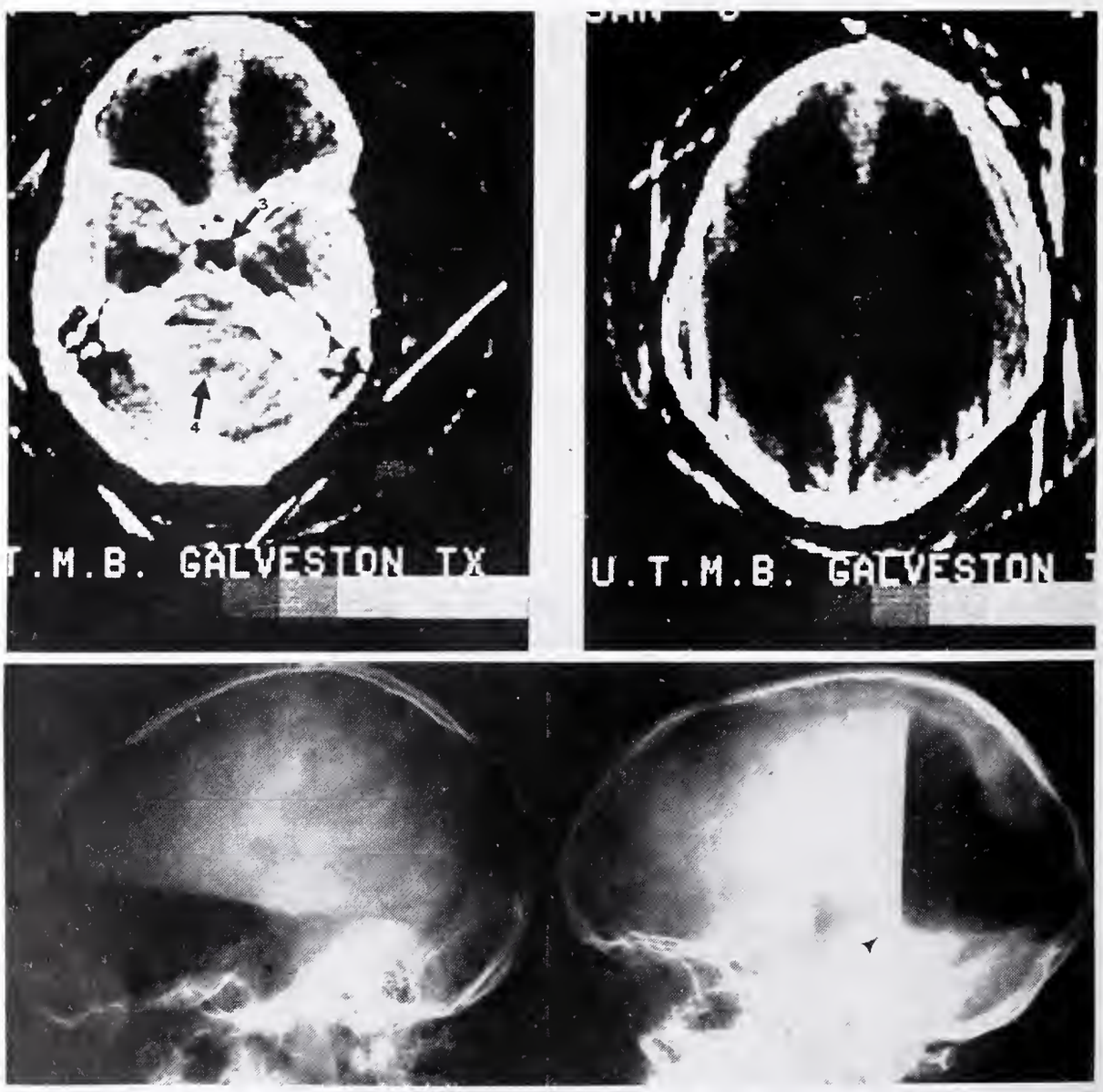
cocerebral atrophy, the lateral ventricles are enlarged less than the cerebral sulci (Fig 14); the fourth ventricle is usually not enlarged unless there is an associated element of pontocerebellar degeneration (which is evidenced by concomitant enlargement of the peripontine cisterns and cerebellar foliae).

In children, the main two types of nontumoral hydrocephalus are: (1) congenital, and (2) postinfectious. Postinfectious (meningitis) hydrocephalus is of the communicating type. It is usually characterized by enlargement of the entire ventricular system. However, in congenital hydrocephalus, there are some distinguishing features which can lead to identification of the causative lesion. For example, in aqueductal stenosis, there is enlargement of the lateral ventricles and of the third ventricle; the fourth ventricle is either normal or smaller than normal size. Sometimes the third ventricle is so much distended that it occupies an enlarged sella turcica (Fig 15). In Chiari malformation, (which may be associated with aqueductal stenosis), besides hydrocephalus, the fourth ventricle may be caudally displaced and seen in lower scans. In congenital Dandy-Walker syndrome, the fourth ventricle is massively distended and the cerebellum is hypoplastic. This is in contradistinction to a posterior fossa arachnoid cyst where the fourth ventricle is narrowed and displaced forward (Fig 16). Cisterna magna, especially in children, occasionally can be considerably large normally. In such cases, the fourth ventricle is normal in location, size, and appearance.

14. A 61-year-old man with "dementia." Alzheimer's disease. The lateral ventricles (arrowhead) are only slightly enlarged, but there is considerable enlargement of cerebral sulci (arrow at one enlarged sulcus). Note that the findings are different from those in NPH (Fig 13).



The CT scan is extremely useful in the evaluation and follow-up of hydrocephalus. The effectiveness of the shunt can be judged easily on serial scans sparing the patient the hazardous air studies which had to be done before the advent of CT scan. Since we have started using CT for evaluation of hydrocephalus, the number of air studies has been reduced to at least about 60%.



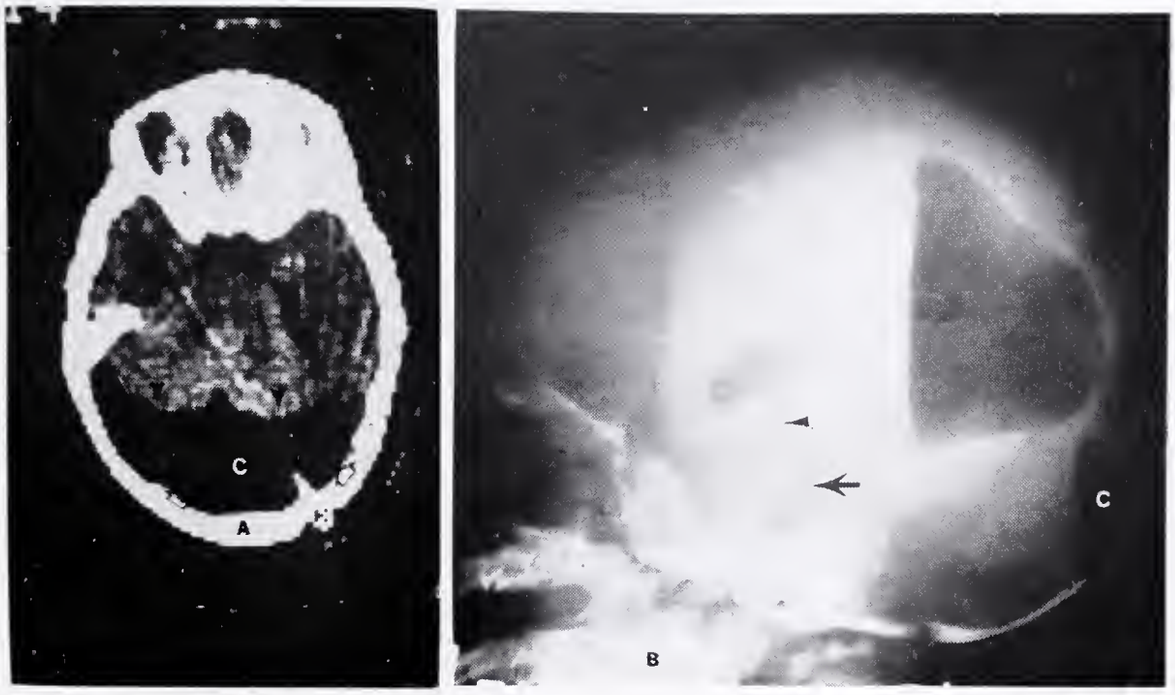
15. A 9-year-old child with hydrocephalus secondary to aqueductal stenosis.
(A) Above. CT scan. Note markedly enlarged lateral ventricles (right). The distended third ventricle (3) is located inside an enlarged sella turcica. The fourth ventricle (4) is small.
(B) Below. Air ventriculogram. Note intrasellar location of the distended third ventricle (3). No air is seen beyond the stenotic aqueduct (arrowhead).

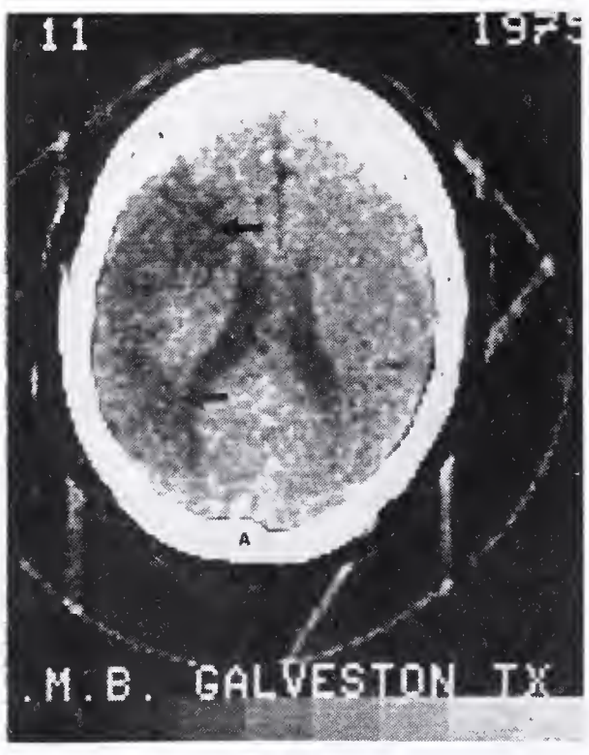
Cerebral Vascular Disease (Stroke)

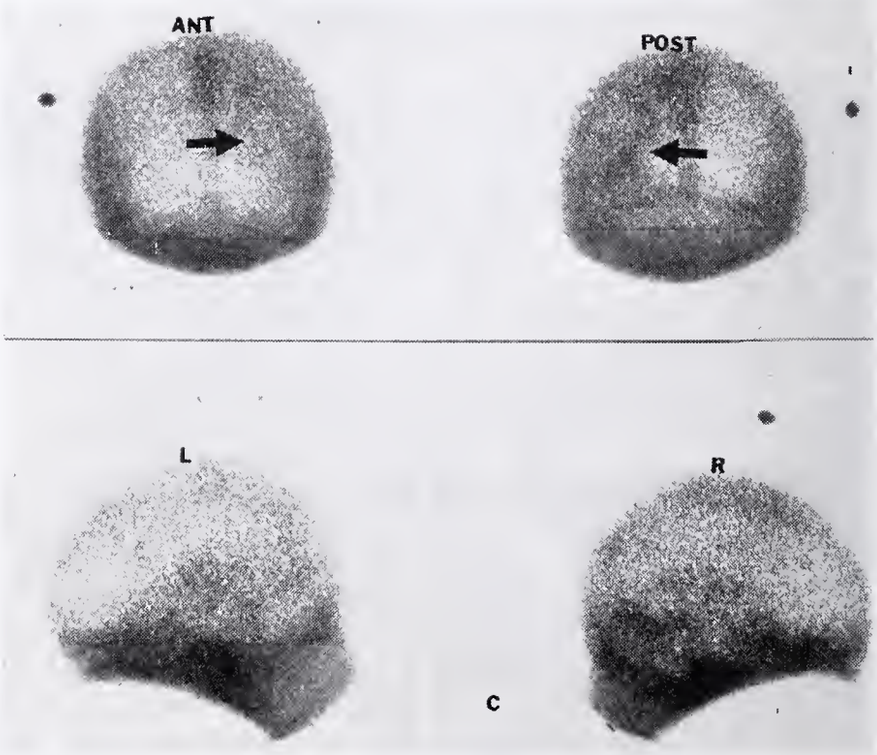
Hemorrhagic and ischemic infarcts can be satisfactorily evaluated on CT scan. No general consensus has been reached as regards the earliest time of detection of an ischemic infarct on the CT scan;[2,5] we think that an acute ischemic infarct is rarely detected earlier than three days after it occurs. However, in hemorrhagic infarct, the blood clot is detected immediately after ictus.

Since ischemic infarcts are usually located in the distribution of the middle cerebral artery, a corresponding area of decreased attenuation appears (Fig 17). Acute infarcts usually cause midline displacement and manifest contrast enhancement. This contrast enhancement is attributed to blood-brain barrier breakdown and extravasation of the contrast material.[6] Old infarcts, however, neither cause midline shift nor accept contrast. Radionuclide scan (both dynamic and static images) helps considerably in the evaluation of cerebrovascular disease (Fig 17). However, the radionuclide scan fails to distinguish between the hemorrhagic and ischemic nature of the lesion. Therefore, I recommend that if a stroke is suspected, a CT scan should be done initially. If a hemorrhagic infarct is identified a radionuclide scan is not needed. Similarly, in cases of ischemic infarcts, a radionuclide scan usually is not needed, but in problem cases it may confirm the nature of the lesion. The hazard of doing only a radionuclide scan is that the hemorrhagic nature of the lesion

16. A 4½-month-old infant with a posterior fossa arachnoid cyst.
(A) CT scan. Note an area of decreased attenuation (EMI units of CSF) (hollow arrows) located behind the forwardly displaced cerebellum (arrowheads). The fourth ventricle cannot be definitely identified because of its compression by the arachnoid cyst (C).
(B) Pneumoencephalogram. Notice that the partly air-filled arachnoid cyst (C) is compressing and forwardly dislocating the fourth ventricle (arrow) and aqueduct (arrowhead).







17. Au infarct in the distributiou of the left middle cerebral artery (MCA). CT sean takeu about 7 days after ictus.
(A) CT scan. Note an area of decreased attenuation (arrows) in the perfusion territory of left MCA.
(B) Images of dynamic radionuclide scan. Observe decreased perfusion in left cerebral hemisphere.
(C) Static images of radionuclide scan. Note area of increased uptake in the left cerebral hemisphere (arrow).

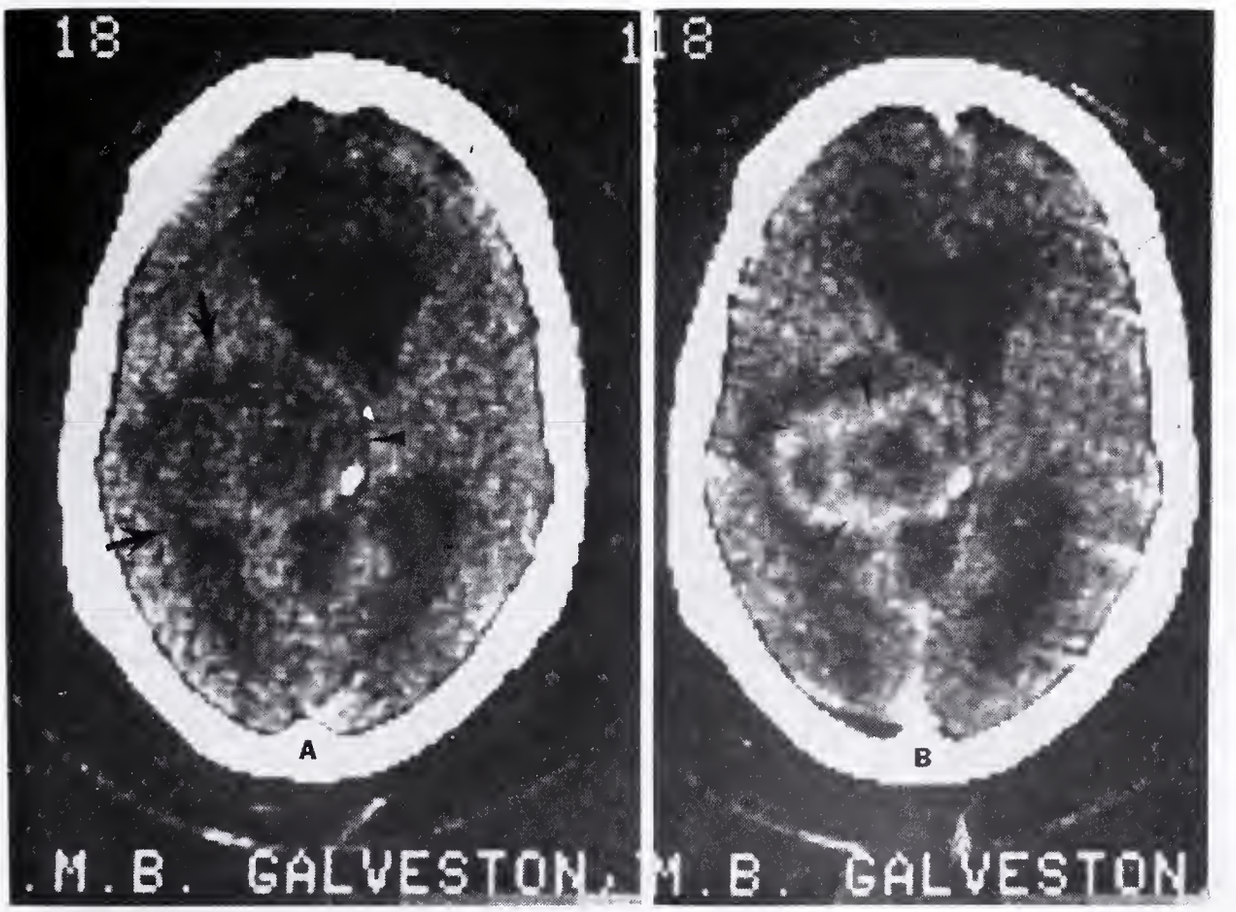
cannot be established with certainty.

Neoplasms

Intracranial neoplasms appear as areas of decreased (Fig 18), increased, or isodense attenuation.[3,9] There are no characteristically distinguishing features between gliomas and metastatic lesions. However, if lesions are multiple, one may assume them to be metastatic lesions, especially if the patient is known to harbor a primary malignant neoplasm. Multicentric glioblastomas do occur in less than 5% of cases. Metastatic lesions are usually surrounded by a considerable degree of cerebral edema. Ventricular shift, compression, and masking of the ventricular outline are helpful findings in identification of any type of mass lesion. Contrast enhancement makes the lesion more pronounced and separates the mass lesion from surrounding edema (Fig 18). In rare instances, especially in the posterior fossa, a lesion may be identified only after administration of iodinated contrast material (Fig 19).

Meningiomas, on the other hand, are

18. A 55-year-old woman with symptoms of increased intracranial pressure and hemiparesis (right side). Glioblastoma multiforme.
(A) On plain CT scan, note an area of decreased attenuation (arrows) in left insula, internal capsule, basal ganglia, and thalamus with compression and displacement of third ventricle (arrowhead). There is hydrocephalus as well.
(B) There is a ring-like contrast enhancement of the lesion (arrowheads) after the patient is given iodinated contrast material. The area of decreased attenuation surrounding the ring is cerebral edema.



usually of increased attenuation; they can be isodense but are rarely of decreased attenuation. Not infrequently, they are surrounded by an area of decreased attenuation, which may be termed a "collar." This "collar" of decreased attenuation either represents cerebral edema, brain atrophy, or cerebrospinal fluid. All of these tumors manifest a variable degree of contrast enhancement; this contrast enhancement is usually pronounced, however (Fig 20).

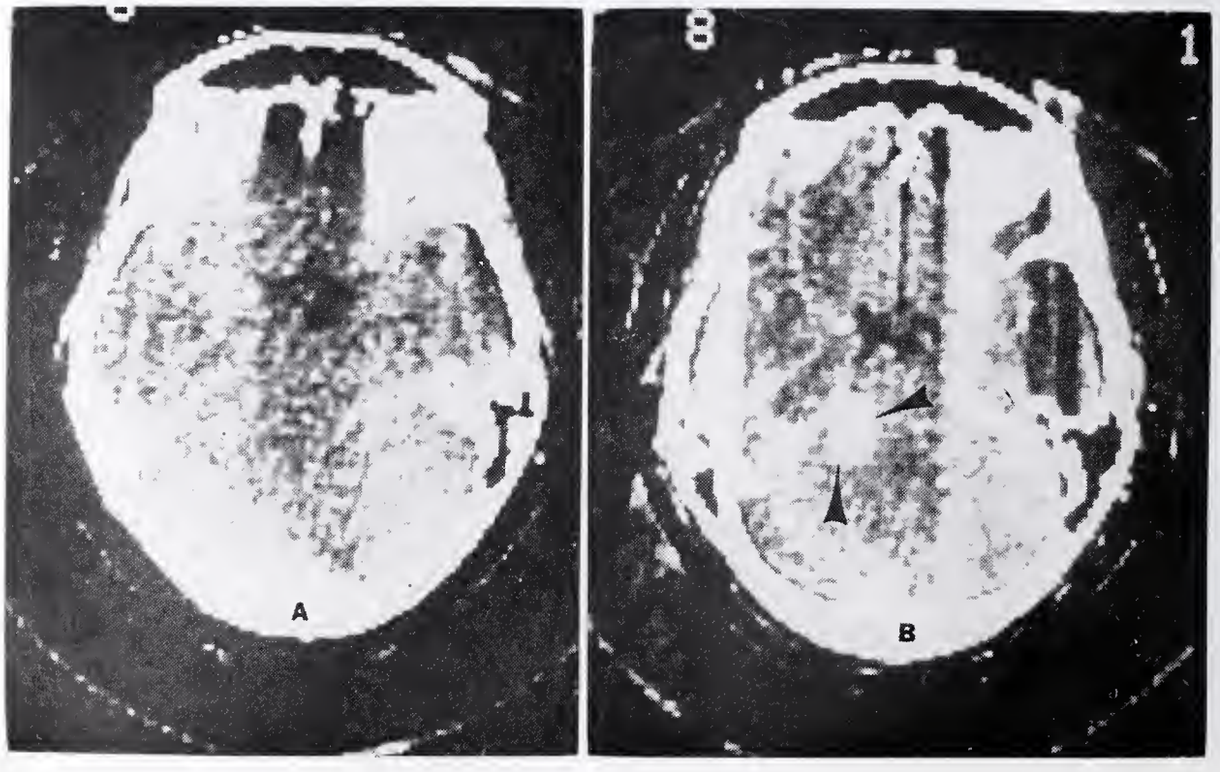
In the work-up of a metastatic lesion, a radionuclide scan should be performed first. It is cheaper and usually will provide the needed information. However, in certain cases, epecially if the lesion is less than 1 cm in its greatet dimension, the CT scan may demonstrate a lesion which could be missed on a radionuclide scan. Also, the CT scan appears to be superior to radionuclide images in the detection of posterior fossa mass lesions. Angiography seldom should be needed in the investigation of multiple intracranial lesions, that is, metastases.

When investigating a sellar-parasellar lesion, special attention should be paid to the "star" which is formed by the cisterns in that location. Its obliteration or deformity should lead one to suspect a lesion in that location (Fig 21). Most of the sellar-parasellar lesions become contrast enhanced.

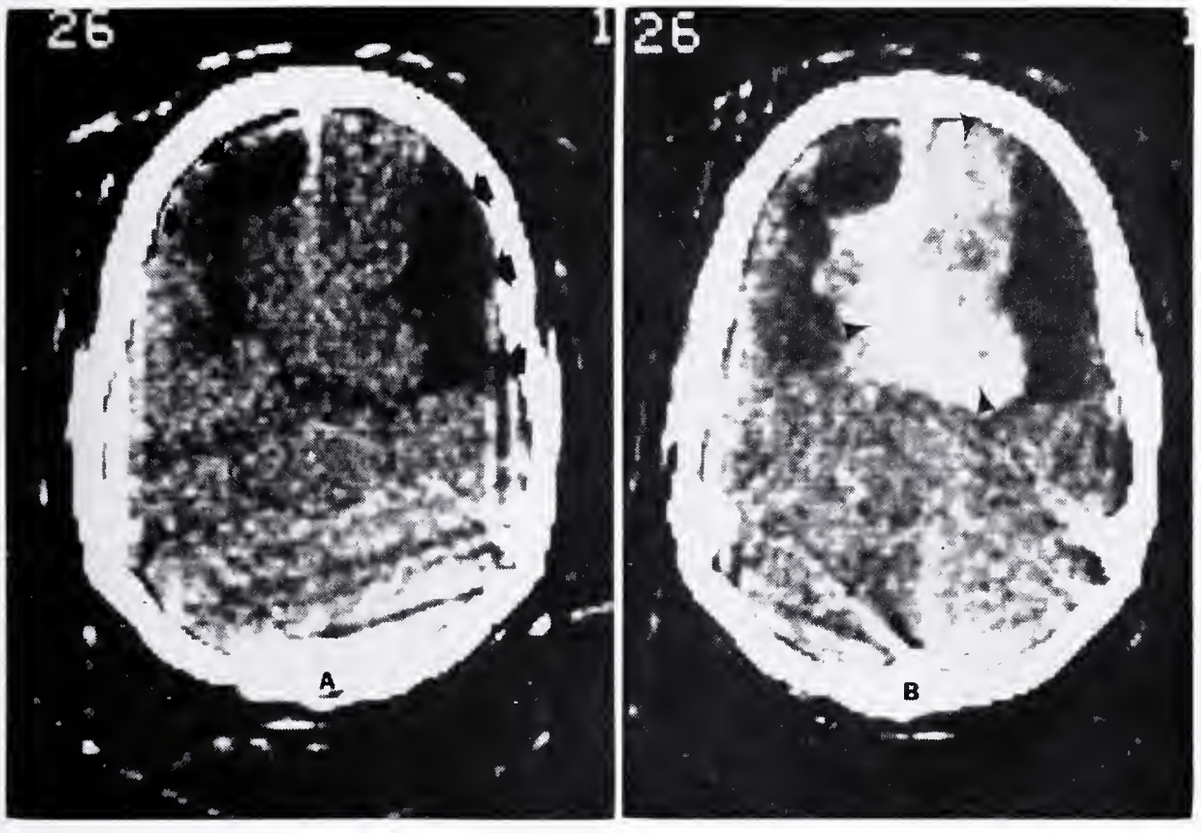
Inflammatory Disease

Subdural effusion, cerebritis, and abscess can be diagnosed on CT scan. Subdural effusion manifests itself as an area of decreased attenuation in the subdural space; its EMI units are higher than those of cerebrospinal fluid. Cerebritis appears as a localized or generalized area of decreased attenuation; its progression into an abscess is characterized by a ring-like

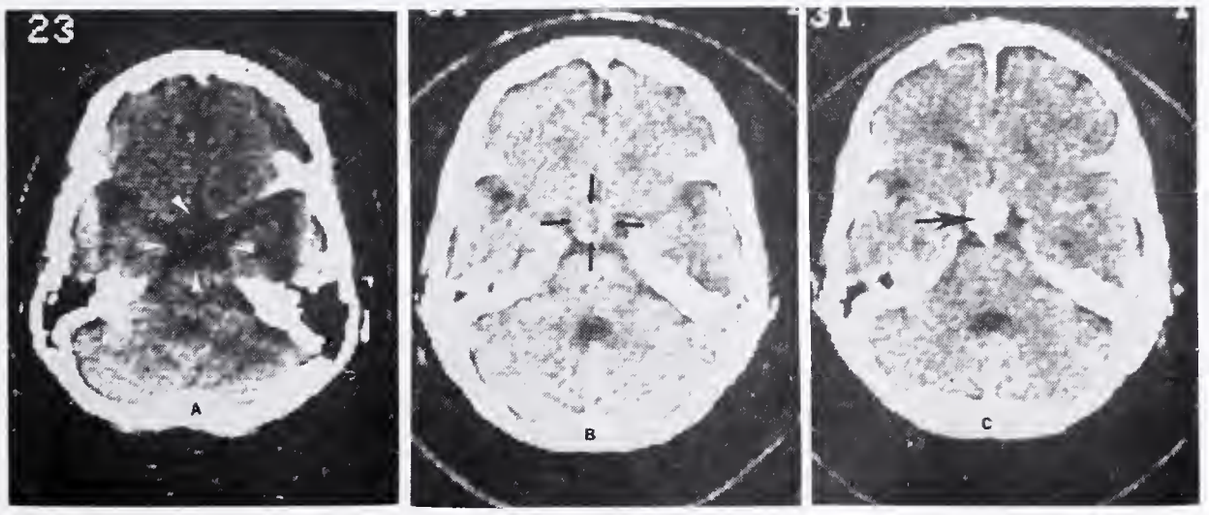
19. A 42-year-old woman with hearing impairment (left side) and enlarged left internal auditory canal.
(A) A plain CT scan at posterior fossa level is essentially unrevealing.
(B) Note that a lesion becomes obvious (arrowheads) after the patient was given iodinated contrast material. This lesion was an acoustic neuroma.

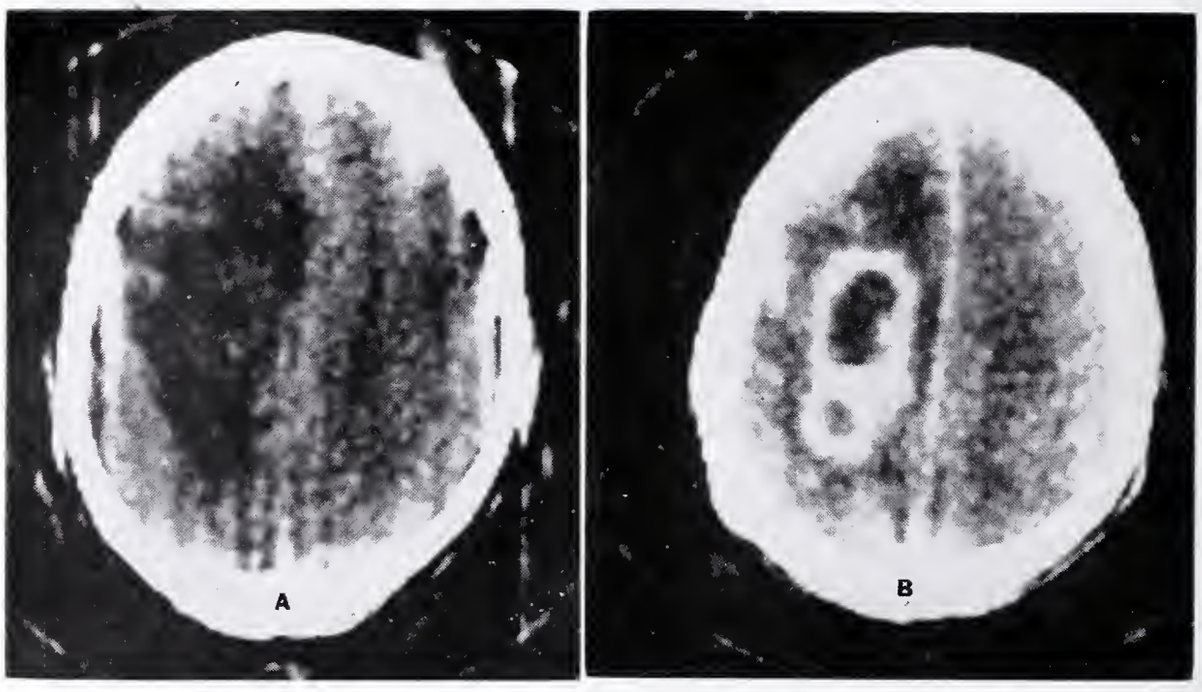


20. A 33-year-old woman with headaches and personality change of three years' duration. Subfrontal massive meningioma.
(A) On a plain CT scan, there is an area of decreased attenuation at the periphery of each frontal lobe (short arrows).
(B) After the patient was given iodinated contrast material, notice profound contrast enhancement (arrowheads). Peripheral area of decreased attenuation represents cerebral edema, cerebrospinal fluid, atrophy, or a combination thereof.



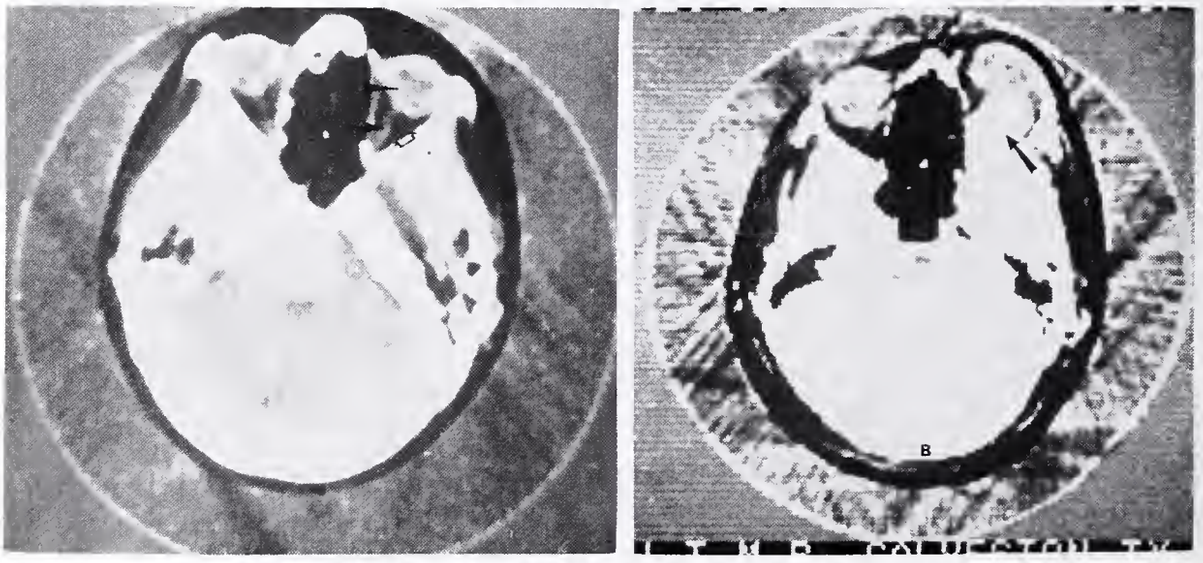
21. A 72-year-old patient with bitemporal hemianopia and pituitary dysfunction. Chromophobe adenoma.
(A) Normal CT scan at suprasellar region. Notice the "star" (white arrowheads) made up of mouth of sylvian fissures, interhemispheric fissure, and suprasellar, prepontine and interpeduncular fossa cisterns. Small dots inside the "star" represent circle of Willis, optic chiasm, infundibular stalk, and mamillary bodies. (By permission, Continuing Education For The Family Physician, *vol 6, no 2, Feb, 1977).*
(B) Patient's scan. Note obliteration of the central part of the "star" by an isodense mass lesion (arrows).
(C) The lesion (arrow) becomes more prominent after the patient is given iodinated contrast material.





22. A 21-year-old man with headaches, seizures, and bilateral papilledema. Intraeerebral abseesses. On the plain CT sean, a large part of the left eerebral hemisphere showed decreased attenuation (A) associated with marked lateral ventricular eompression and shift. On the eontrast CT scan, two eontiguous ring-like lesions (B) can be seen. Note that the falx is also somewhat tilted to the right.

23. A 56-year-old woman with eervical adenopathy and right proptosis. Orbital lymphoma.
(A) Normal orbital sean. Notiee normal optie nerve (arrow), globe (arrowhead), and retrobulbar spaee (hollow short arrow).
(B) Patient's orbital scan. Note a large area of inereased attenuation (long arrow) oceupying almost the entire right retrobulbar space and causing eonsiderable proptosis of the globe (short arrow).



lesion on a contrast CT scan (Fig 22). A ring-like lesion should not be considered pathognomonic of an abscess; metatasis, glioma (Fig 18B), and a resorbing intracerebral clot can have the same appearance.

Orbit

The retrobulbar space usually has eluded conventional neuroradiological procedures except for orbitography where the contrast material is instilled in the retrobulbar space. However, orbitography is not a widely practiced technique. The CT scan has therefore been of extreme usefulness in the evaluation of diseases in the retrobulbar space.[7] Space-taking lesions arising from the optic nerve or from the surrounding retrobulbar space structures usually can be detected easily (Fig 23A,B). For visualization of orbital structures, the usual window width is 200 and window level is 10-20. Besides intrinsic disease of the retrobulbar space, extension of the intracranial disease (for example, hypothalamic chiasmal tumors and tuberculum sellae meningioma) into the retrobulbar space can be evaluated by this technique.

Summary and Conclusion

CT scanning is a relatively noninvasive radiologic means of investigating neurological disorders; a high percentage of diagnostic accuracy can be accomplished by skillful interpretation. It can depict both the anatomic pathology and pathophysiology of the lesion. Its value in head trauma, subarachnoid and intracerebral hemorrhage, intracranial neoplasms, and hydrocephalus has been clearly established. No consensus has yet emerged regarding the rigid criteria for using either a CT scan or radionuclide scan in the investigation of neurological disorders. Although the radionuclide scan can provide information relating to an abnormality, usually it cannot match the CT scan in regard to the pathologic characterization and precise anatomical location of the lesion. I think that in the evaluation of metastatic disease, a radionuclide scan should be performed because it is the less expensive and the information it provides may be all that is needed for the care of the patient. Also, the value of the dynamic radionuclide scan in occlusive cerebrovascular disease is obvious. It must, however, be stressed that the radionuclide scan and the CT scan should not both be considered as routine means of investigating neurological disorders; great discretion should be exercised in obtaining these studies, and initially only one appropriate study should be requested (Fig 1). If neither the CT scan nor radionuclide scan provides an answer to a neurological problem, their combined usage may then be justified.

References

1. Ambrose J: Computerised transverse axial scanning (tomography), Part 2. Clinical application. Brit J Radiol 46:1023-1047, 1973.

2. Chiu LC, Fodor LB, Cornell SH, et al: Computed tomography and brain scintigraphy in ischemic stroke Am J Roentgenol 127:481-486, 1976.

3. Davis DO, Pressman BD: Computerized tomography of the brain. Radiol Clin North Am 12(2):297-313, 1974.

4. Davis KR, New PF, Ojemann RG, et al: Computed tomographic evaluation of hemorrhage secondary to intracranial aneurysm. Am J Roentgenol 127:143-153, 1976.

5. Davis KR, Taveras JM, New PF, et al: Cerebral infarction diagnosis by computerized tomography. Analysis and evaluation of findings. Am J Roentgenol Radium Ther Nucl Med 124:643-660, 1975.

6. Gado MH, Phelps ME, Coleman RE: An extravascular component to contrast enhancement in cranial computed tomography; Part II. Contrast enhancement and the blood-tissue barrier. Radiol 117:595-597, 1975.

7. Momose KJ, New PF, Grove AS, et al: The use of computer tomography in ophthalmology. Radiol 115(2):361-368, 1975.

8. New PF, Scott WR, Schnur JA, et al: Computerised axial tomography with the EMI-scanner. Radiol 110:109-123, 1974.

9. New PF, Scott WR, Schnur JA, et al: Computed tomography with the EMI-scanner in the diagnosis of primary and metastatic intracranial neoplasms. Radiol 114:75-87, 1975.

10. New PF, Scott WR: Computed axial tomography of the brain and orbit (EMI scanning). Williams and Wilkins, Baltimore, 1975.

11. Scott WR, New PF, Davis KR, et al: Computerized axial tomography in intracerebral and intraventricular hemorrhage. Radiol 112:73-80, 1974.

12. Steiner L, Bergvall U, Zwetnow N: Quantitative estimation of the intracerebral and intraventricular hematoma by computer tomography. Acta Radiol (Supp 346)143-154, 1975.

13. Zimmerman RA, Patel S, Bilaniuk LT: Demonstration of purulent bacterial intracranial infections by computed tomography. Am J Roentgenol 127:155-165, 1976.

Mohammad Sarwar, MD, Division of Neuroradiology, The University of Texas Medical Branch, Galveston, TX 77550.

Cloacogenic transitional carcinoma of the anus

T. H. Capers, MD

Tumors arising from the transitional epithelium of the anal canal are still relatively infrequent but by no means rare among anorectal tumors.[1] Of 20 cases of anorectal tumors seen from 1972 to 1976, four were cloacogenic transitional cell carcinomas and are described in this article.

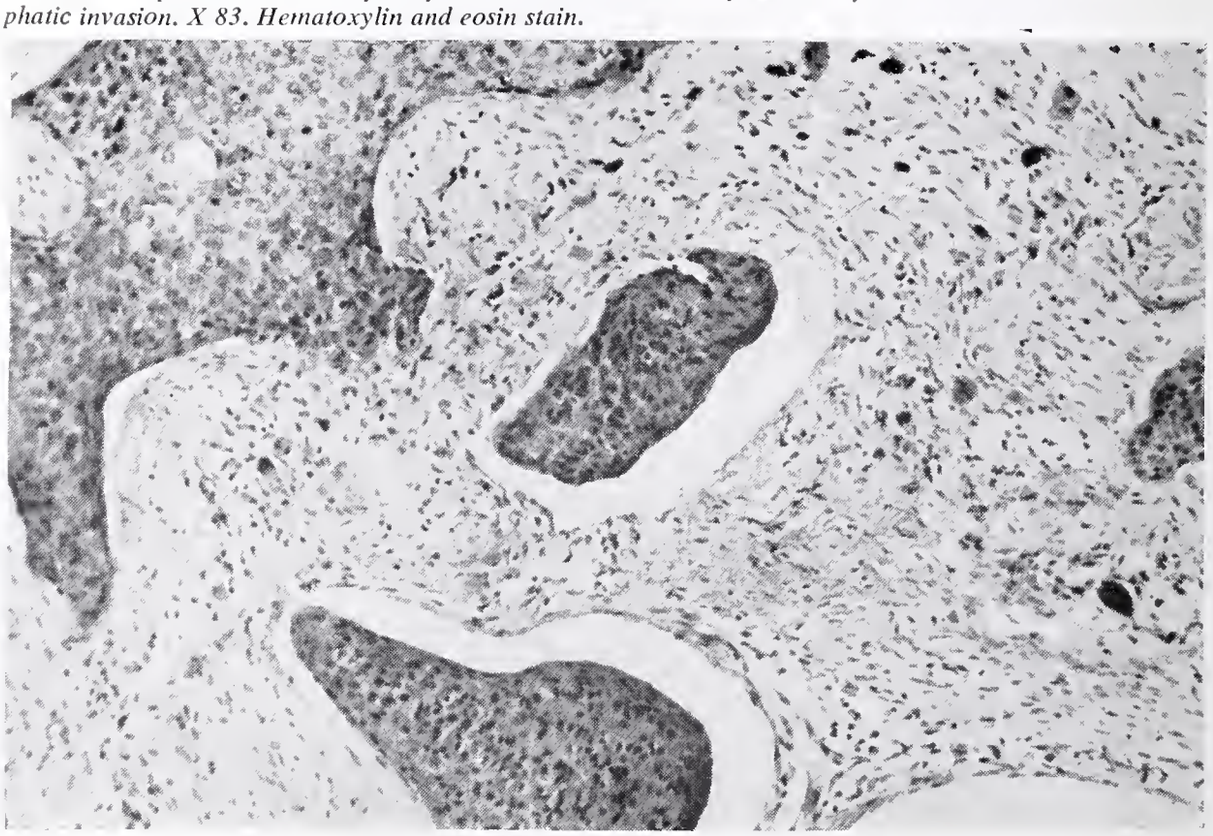
We reviewed slides from 20 cases of tumors of the anus, and excluded (1) those not showing palisading, and (2) those showing excess keratinization. Four cases remained, and the charts on these cases were reviewed as to treatment and outcome.

Case Reports

Case 1: A 52-year-old white man entered the hospital on June 18, 1972, with a five-month history of hemorrhoids, a 15.89 kg (35 lb) weight loss, and inability to pass bulky stools. Physical examination revealed a large fungating mass holding the anal region open. Results of chemical tests (SMA 12, SMA 6) were within normal limits. The biopsy was read as squamous carcinoma, but review showed it to be cloacogenic transitional cell carcinoma (Fig 1). The day after admission, the patient underwent an abdominal perineal resection during which the levator ani was palpable. He died 14 months later, during which time jaundice developed with levels of bilirubin at 10.4 mg/100 ml and inorganic phosphorus at 4.6 mg/100 ml.

Case 2: A 60-year-old white man had hidradenitis suppurativa of the anus for 20 years and was hospitalized in March 1971 and again in October 1972. He had a recurrence on Oct 10, 1972, following a

1. Case 1. Specimen shows no fresh formation in solid masses of cells and lymphatic invasion. X 83. Hematoxylin and eosin stain.

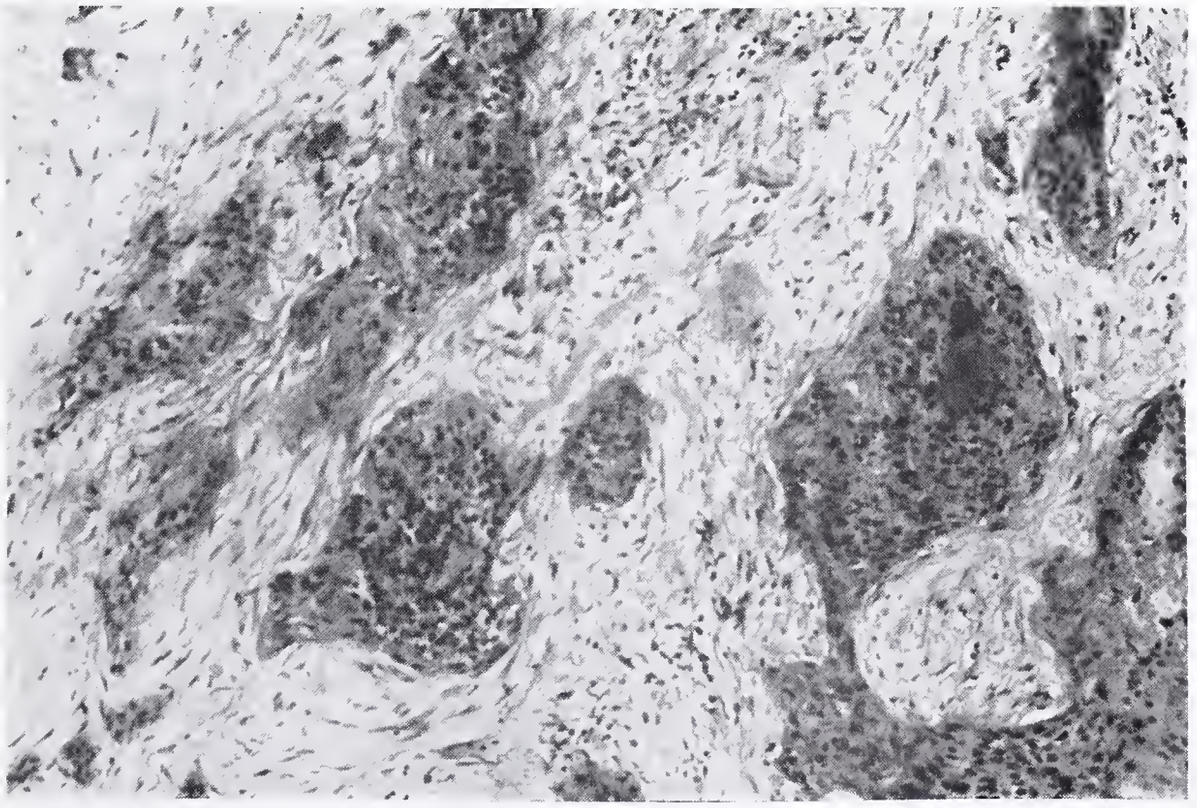


perineal excision. A biopsy on Nov 1 revealed transitional cell cancer (Fig 2) and resection and colostomy were performed. The sigmoid colon was removed and inguinal adenopathy was found. Skin flaps were placed on the sacral area. The lesion cleared and the patient was discharged Jan 8, 1974. He is still living.

Case 3: A 53-year-old white man was hospitalized because of recurring moles of the anus for five days. He also had constipation, some bleeding, rectal pain, and a hard mass of the posterior rectum which was diagnosed as squamous cell carcinoma. An abdominal perineal resection was performed on March 2, 1972, with resection of the mesocolon, distal sigmoid colon, rectum, perineum, and prostate gland (Fig 3). The operative specimen was diagnosed as cloacogenic carcinoma. By Aug 27, 1973, he had inguinal node metastasis and emphysema. The colostomy was functional, but there was scrotal edema. The hemoglobin value was 8.7 gm/100 ml, and hematocrit was 30%. The patient was treated symptomatically with narcotics and analgesics, and died on Sept. 12, 1973.

Case 4: A 74-year-old white man had weight loss for several months, bright red blood per rectum, and alternate constipation and diarrhea. A biopsy at another hospital on June 12, 1974, was read as squamous cell cancer. He returned, terminally ill, on Nov 15, 1974, and a biopsy at that time was read as transitional cell cancer (Fig 4). Widespread metastases, including skin lesions and recurrent carcinoma in the perineum, developed, and the patient died on Nov 10, 1974.

2. Case 2. Specimen shows solid masses of cells with marginal palisades and no keratinization. X 83. Hematoxylin and eosin stain.



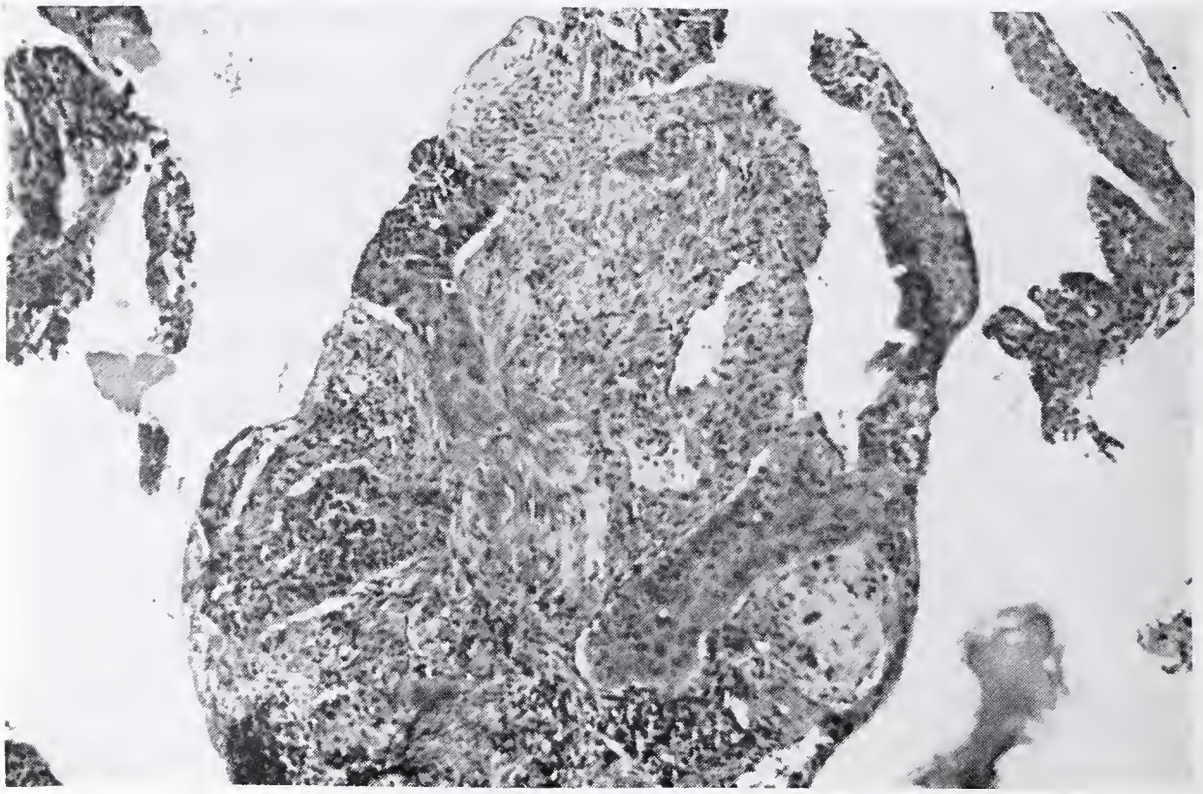
Discussion

Cloacogenic transitional cell carcinomas are cancers that arise from a membrane (and its appendages) that is interposed between the dentate line and the true rectum. This is called properly the cloacal membrane.[3] A wide variety of histological patterns involving the anorectal junction is attributed to origin from this membranous zone. "Cloacogenic carcinoma" is proposed by Grinvalvsky and Helwig to designate these tumors, although many resemble transitional cell cancers.

So-called epidermoid or squamous cell carcinomas of the rectum, independent of the anorectal junction, may be explained by the cephalad course that the anal ducts take beneath the rectal mucosa, and the origin of these tumors from transitional epithelium lining these ducts.[3]

Cloacogenic carcinoma tumor accounts for 2.7% of anorectal neoplasms. It occurs twice as often in women as in men, and at ages 60 to 70, rare patterns such as oat-cell, mucoepidermoid, and adenoid cystic carcinoma are variants. At surgery, lymph node involvement is seen in 19% of the cases. Wide abdominoperineal resection results in cure in 50% of cases. Additional vaginectomy is recommended for female patients.[5] The average survival time is 19.7 months without treatment and 27.8 months with some form of treatment.[5] Radiation of small lesions has been advocated by Roux-Berger and Ennuyer.[6] In 17 cases not extending beyond the anal canal, the tumor was cured. Grinnell recommends radical surgery for all anorectal tumors.[2]

3. Case 3. Specimen shows minimal keratinization and slight marginal palisade. X 83. Hematoxylin and eosin stain.



We have had four patients with transitional cell cancer of the anus. All were white men ages 52 to 79. In three of these cases, abdominoperineal resection was performed. One patient was treated with irradiation postoperatively, but he died as did two others. Thus, in this series, the outlook for patients with these tumors is not encouraging, perhaps because our patients did not seek treatment until the tumors had reached advanced stages. One patient is still living and the others lived from five months to 1½ years.

Conclusion

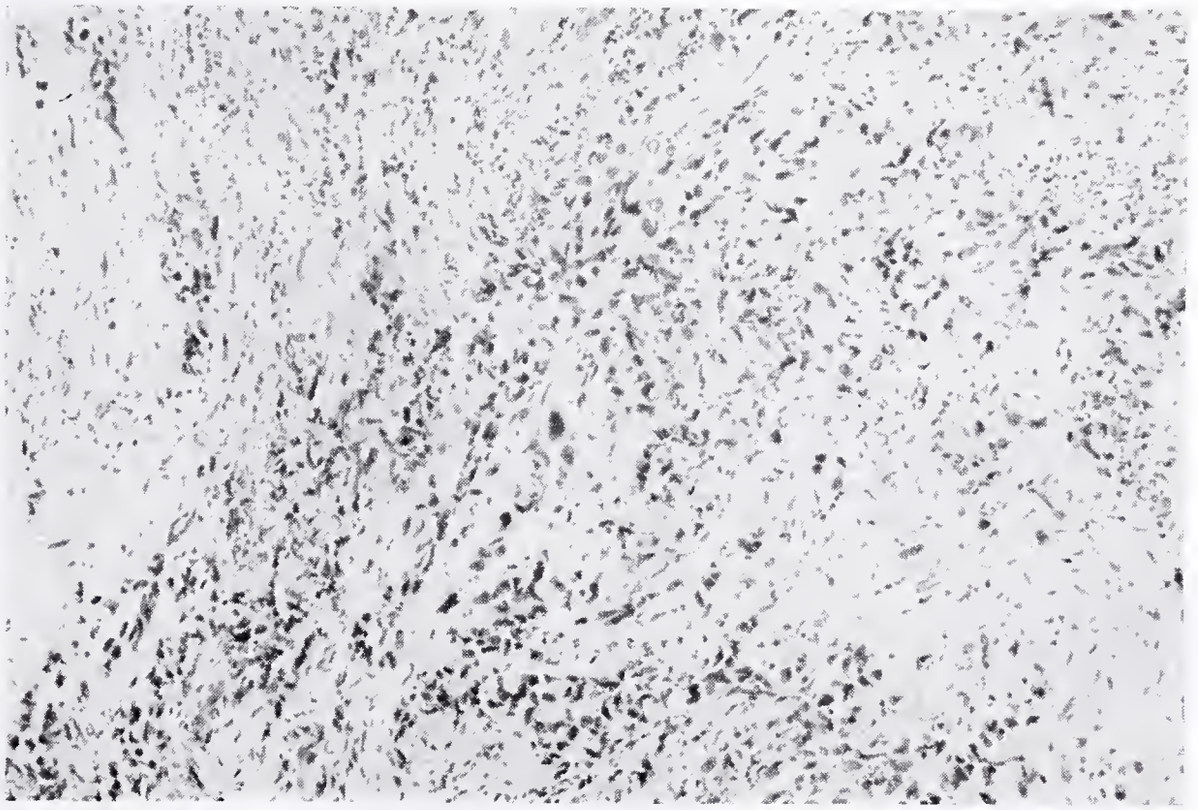
Despite standard treatment, only one of four patients with cloacogenic transitional carcinoma of the anus lived. Physicians reporting larger series do not paint so grim a picture, and some report a cure rate of 50% when treatment is by wide abdominoperineal resection, which we advocate. Radiation may help in cases of small cancers, but in our cases it was of no great help.

References

1. Dukes CE: Peculiarities in the pathology of cancer of anorectal region. Proc Roy Soc Med 39:763-765, 1946.
2. Grinnell RS: Analysis of 49 cases of squamous cell carcinoma of the anus. Surg Gynec Obstet 98:29-39, 1954.
3. Grinvalvsky HT, Helwig EB: Carcinoma of anorectal junction; histological considerations. Cancer 9:480-488, 1956.
4. Grodsky L: Rare nonkeratinizing malignancies of anal region; pathologic features. Arch Surg 90:216-221, 1965.
5. Klotz RG Jr, Pamukcoglu T, Souilliard DH: Transitional cloacogenic carcinoma of the anal canal. Cancer 20:1727-1745, 1967.
6. Roux-Berger JL, Ennuyer A: Carcinoma of anal canal; statistics of Foundation Curie. 60:807-815, 1948.

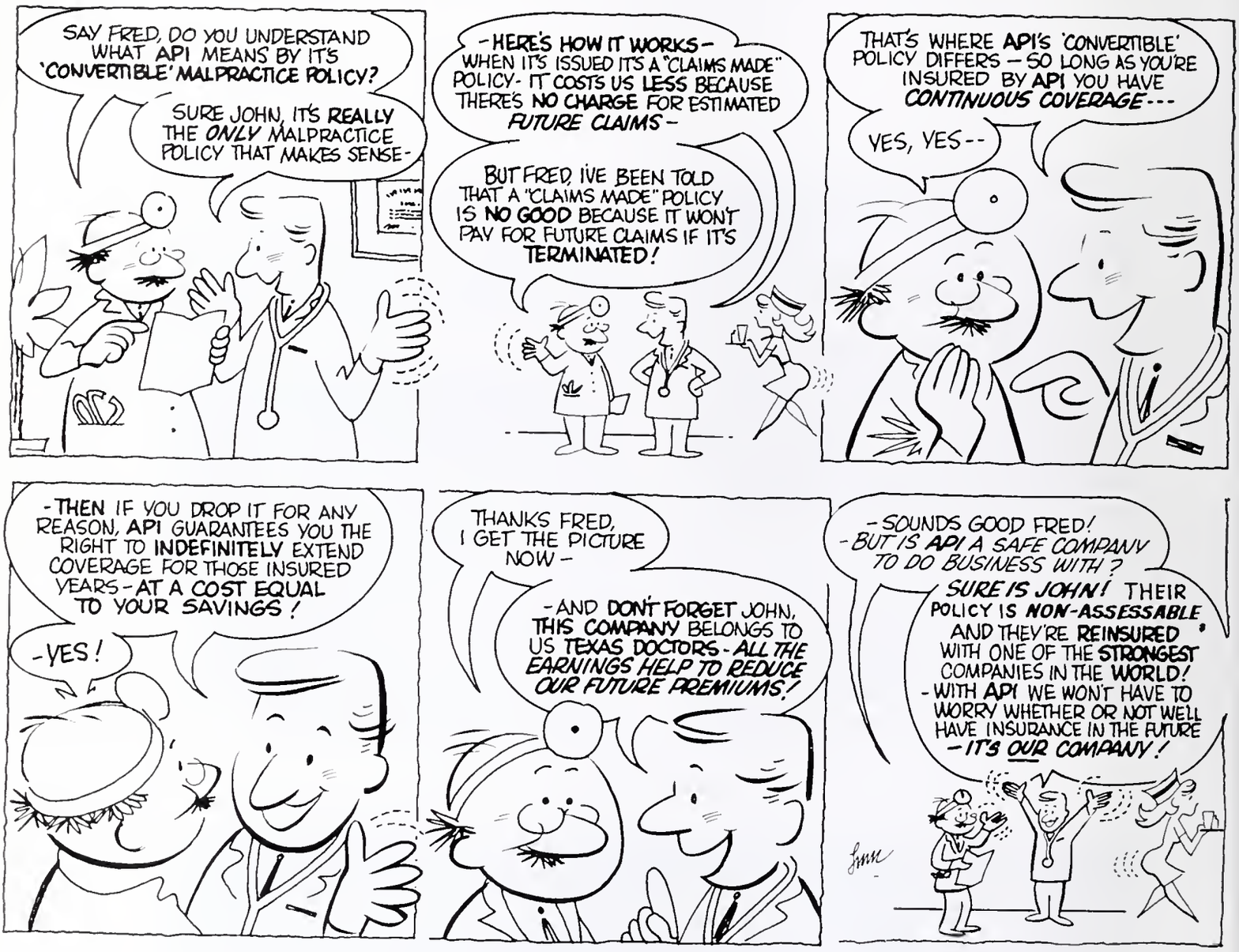
Thomas H. Capers, MD, Chief, Anatomic Pathology, Veterans Administration Hospital, 4500 S. Lancaster Road, Dallas, TX 75216.

4. Case 4. Specimen displays complete lack of organization and individual tumor cells of a high grade neoplasm. X 83. Hematoxylin and eosin stain.



MALPRACTICE INSURANCE...

... API's CONVERTIBLE, NON-ASSESSABLE POLICY IS THE BEST!


SAY FRED, DO YOU UNDERSTAND WHAT API MEANS BY IT'S 'CONVERTIBLE' MALPRACTICE POLICY?
SURE JOHN, IT'S REALLY THE ONLY MALPRACTICE POLICY THAT MAKES SENSE-
-HERE'S HOW IT WORKS- WHEN IT'S ISSUED IT'S A "CLAIMS MADE" POLICY- IT COSTS US LESS BECAUSE THERE'S NO CHARGE FOR ESTIMATED FUTURE CLAIMS-
BUT FRED, I'VE BEEN TOLD THAT A "CLAIMS MADE" POLICY IS NO GOOD BECAUSE IT WON'T PAY FOR FUTURE CLAIMS IF IT'S TERMINATED!
THAT'S WHERE API'S 'CONVERTIBLE' POLICY DIFFERS — SO LONG AS YOU'RE INSURED BY API YOU HAVE CONTINUOUS COVERAGE---
YES, YES--
-THEN IF YOU DROP IT FOR ANY REASON, API GUARANTEES YOU THE RIGHT TO INDEFINITELY EXTEND COVERAGE FOR THOSE INSURED YEARS - AT A COST EQUAL TO YOUR SAVINGS!
-YES!
THANKS FRED, I GET THE PICTURE NOW -
-AND DON'T FORGET JOHN, THIS COMPANY BELONGS TO US TEXAS DOCTORS - ALL THE EARNINGS HELP TO REDUCE OUR FUTURE PREMIUMS!
-SOUNDS GOOD FRED! -BUT IS API A SAFE COMPANY TO DO BUSINESS WITH?
SURE IS JOHN! THEIR POLICY IS NON-ASSESSABLE AND THEY'RE REINSURED WITH ONE OF THE STRONGEST COMPANIES IN THE WORLD! - WITH API WE WON'T HAVE TO WORRY WHETHER OR NOT WE'LL HAVE INSURANCE IN THE FUTURE -IT'S OUR COMPANY!

And that's not all. You'll have the advantage of a peer review group to screen out claim-prone applicants and provide claim review with defendant doctor and attorney. You'll get legal representation by a nationally recognized law firm with a history of successful, tough defense of malpractice suits.

API has grown to $1,000,000 in policyholders surplus — net worth.

Doctor, find out how to join your colleagues who have learned the way out of the professional liability dilemma. Call or write today!

AMERICAN PHYSICIANS INSURANCE EXCHANGE

1400 FRITO-LAY TOWER • DALLAS, TEXAS 75235 • PHONE: (214) 350-6661

API is reinsured by one of America's largest reinsurance groups — rated A+XV by A.M. Best. (The highest rating available).

Enjoy a Hawaiian Holiday--
Surf, Sun and CME

AMA Regional CME Meeting
Honolulu, Hawaii
Oct. 30-Nov. 4, 1977

"the loveliest fleet of islands that's anchored in any ocean..."

—Mark Twain

Hawaii! What a perfect setting for continuing your medical education!

The AMA Regional Meeting in Honolulu, Hawaii offers an ideal blend of study and sun. Morning hours are devoted to study. Up to 23 hours of Category 1 credit may be earned, with 53 credit hours of Category 1 available. After 1:00 p.m. you are free to pursue Hawaii's abundant pleasures. Grab a surf board and hang ten! Try scuba diving or play tennis. Play golf, go fishing, or see the sights. Whatever you choose, Hawaii's weather will be totally cooperative.

In 1977, the AMA is also offering Regional CME Meetings in the following picturesque settings:

Tan-Tar-A Golf and Tennis Resort
Osage Beach, Missouri
Sept. 16-18

Sawmill Creek
Huron, Ohio
Oct. 7-9

The Homestead
Hot Springs, Virginia
Sept. 30-Oct. 2

(Photo courtesy of Hawaii Visitors Bureau)

Use the coupon below to send for your brochure on Hawaii or any of the other AMA Regional CME Meetings.

CME

Dept. of Meeting Services
American Medical Association
535 N. Dearborn
Chicago, IL 60610

Please send the following brochure(s):

☐ Hawaii ☐ Tan-Tar-A
☐ The Homestead ☐ Sawmill Creek

Name_____

Address_____

City/State/Zip_____

Wichita Falls Clinic

501 Midwestern Parkway East, Wichita Falls, Texas 76302

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.

GENERAL THORACIC AND VASCULAR SURGERY
Cecil H. Meares, M.D.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Richard H. Moore, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOLOGY AND RADIOACTIVE ISOTOPES
Thomas K. Bose, M.D.
Matthew Powers, M.D.

PEDIATRICS
Joseph Bilder, Jr., M.D.
George W. Slaughter, M.D.

INTERNAL MEDICINE
P. K. Smith, M.D., F.A.C.P.
I. L. Humphrey, Jr., M.D.
Preston McCall, M.D.
Julian C. Sleeper, M.D., Cardiology
David M. Pogue, M.D., Cardiology
Wendell I. Wyatt, M.D.
Lowell L. Harvey, M.D.

FAMILY PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
James T. Cook, M.D.
Madeleine Kent, M.D.

UROLOGY
John C. Wurster, M.D.

OBSTETRICS AND GYNECOLOGY
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
James M. Missler, Administrator

Bank Financing for Physicians

We specialize in equipment leasing and financing, unsecured loans and lines of credit to Physicians And we handle it all by mail.

Unsecured loans with optional dollar amounts (to $10,000), optional payment schedules. Equipment leasing to give you tax advantages, restore operating capital, convert unused depreciation to cash. And lines of credit to provide for future cash needs.

We charge tax deductible bank rates. You won't spend any of your valuable time at your bank, and you'll reserve your regular bank credit for times when you really need it.

For further information, complete and mail this coupon today. I want to know more about:

__ Unsecured Loans __ Sale & Lease Back Plans
__ A Line of Credit __ Lease-Purchase Plans
__ Equipment Leasing __ Equipment Financing
__ Other: _____

Dr. _____ Phone _____
Address _____
City _____ State ____ Zip _____

Professional Services Division
TEXAS BANK AND TRUST COMPANY
P. O. Box 101 Jacksonville, Texas 75766

BRIEF SUMMARY OF
PRESCRIBING INFORMATION

ANTIMINTH® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

When you're good people recognize you.

Highly effective
Single-dose convenience
Non-staining
Economical
Pleasant tasting

Antiminth®
(pyrantel pamoate)
equivalent to 50 mg pyrantel/ml
ORAL SUSPENSION

a drug of choice in pinworm infections

Please see brief summary of prescribing information on facing page.

©1977 LONE RANGER T.V., INC.

BREATHING WITH COMFORT.

Choledyl – a highly soluble, true salt of theophylline – rapidly relaxes bronchospasm to promote easier breathing. And, gastric discomfort is minimal.

Because Choledyl is more stable...more rapidly absorbed from the G.I. tract than aminophylline.

Available in both tablets and elixir for patients with obstructive lung disease.

Choledyl® (oxtriphylline) Tablets and Elixir CAUTION: Federal law prohibits dispensing without prescription. Each partially enteric coated tablet contains 200 mg or 100 mg oxtriphylline. Each teaspoonful of the elixir contains 100 mg oxtriphylline, alcohol 20%. *Indications.* Choledyl (oxtriphylline) is indicated for relief of acute bronchial asthma and for reversible bronchospasm associated with chronic bronchitis and emphysema. *Warning.* Use in pregnancy – animal studies revealed no evidence of teratogenic potential. Safety in human pregnancy has not been established; use during lactation or in patients who are or who may become pregnant requires that the potential benefits of the drug be weighed against its possible hazards to the mother and child. *Precautions.* Concurrent use of other xanthine-containing preparations may lead to adverse reactions, particularly CNS stimulation in children. *Adverse Reactions.* Gastric distress and, occasionally, palpitation and CNS stimulation have been reported. *Dosage.* Average adult dosage: Tablets – 200 mg, 4 times a day; Elixir – two teaspoonfuls, 4 times a day. *Supplied.* 200 mg yellow, partially enteric coated tablets in bottles of 100 (N 0047-0211-51) and 1000 (N 0047-0211-60); Unit Dose – 200 mg tablets (N 0047-0211-11); 100 mg red, partially enteric coated tablets in bottles of 100 (N 0047-0210-51). Elixir – bottles of 16 fl oz (1 pint) 474 ml (N 0047-0215-16). *Toxicity.* Oxtriphylline, aminophylline and caffeine appear to be more toxic to newborn than to adult rats. No teratogenic effects have been seen. Full information is available on request.

CH-GP-51-4/C

WARNER/CHILCOTT
Division, Warner-Lambert Company
Morris Plains, N.J. 07950

CHOLEDYL® (OXTRIPHYLLINE)

SINGLE-ENTITY
BRONCHODILATION
MINIMAL GASTRIC DISCOMFORT

If you're sick of visiting auto showrooms and high-pressure salesmen, try our remedy.

You can see every kind of car made — American or foreign — in one place. Yours. Just let us know the cars you're interested in. We'll bring you full color brochures with all the information. Then we'll make all the leasing arrangements. It's easy — and your new car will be just what the doctor ordered.

There are more advantages too:

- Tax write-offs
- Low lease costs
- Positive cash flow
- No record-keeping necessary
- Custom-tailored leases
- Total maintenance of Lincoln-Mercury products.

Texas Medical Association Automobile Lease Program

Underwritten by:

Bankston Rentals, Inc. • 4747 LBJ Freeway • Dallas, Texas 75234 • 214/233-1441
Southwest Motor Leasing, Inc. • 6737 Southwest Freeway • Houston, Texas 77074 • 713/777-3816

Suction catheter technique: a preliminary report on a new device

John S. Carleton, MD

Suction catheter technique has undergone an evolution from reuse of catheters retained in open "soak" bottles to a strict aseptic procedure involving gown, mask, gloves, and disposal of the catheter after each use. However, the literature offers no sound evidence that imposition of strict aseptic technique has altered the rate of pulmonary infection. Possible causes for this paradox are discussed in this article, which describes a new suctioning device and reports one year's experience with this device in an intensive care unit (ICU).

Review of Literature

The incidence of infection in tracheotomized patients has been reported to vary from 5 to 26%.[1-3] An extensive 20-month study by Lowbury and associates[4] revealed that implementation of numerous aseptic techniques in ICUs did not reduce the incidence of infections. They cite a possible cause as being a lapse in technique by personnel as a result of ignorance or pressure of work. One-use disposable catheters and sterile technique was employed throughout the study. The researchers found that when one patient became infected, most, if not all, the other patients contracted infection. This implies transport of the organisms by nursing personnel. Sutter and coworkers[5] have studied the incidence of *Pseudomonas* contamination in catheter rinse water. In their report there is the implication that the rinse water is the source of pulmonary infection, although suction machines were often shared between patients and gloves were not worn during the suction procedure. Bluemle[6] conducted a study of four patients, using one- and two-catheter techniques for oral and tracheal suctioning, and found no significant difference in tracheal bacterial counts between the two groups.

Bryant and associates[7] stress the importance of basing infection rates on clinical rather than laboratory studies, in other words, infection rather than colonization of the tracheobronchial tree. They studied 129 patients and determined that colonization usually occurs in most patients within 48 hours following tracheostomy. Rogers and Osterhout[8] stressed that elimination of tracheobronchial secretions is important in preventing pulmonary infections. He stated, "Data indicate that the importance of maintaining an airway free from excessive secretions probably outweighs the problem of contamination in the prevention of pneumonia in most patients." In his study a high incidence of pulmonary infections occurred in patients with central nervous system lesions who were unable to eliminate their secretions.

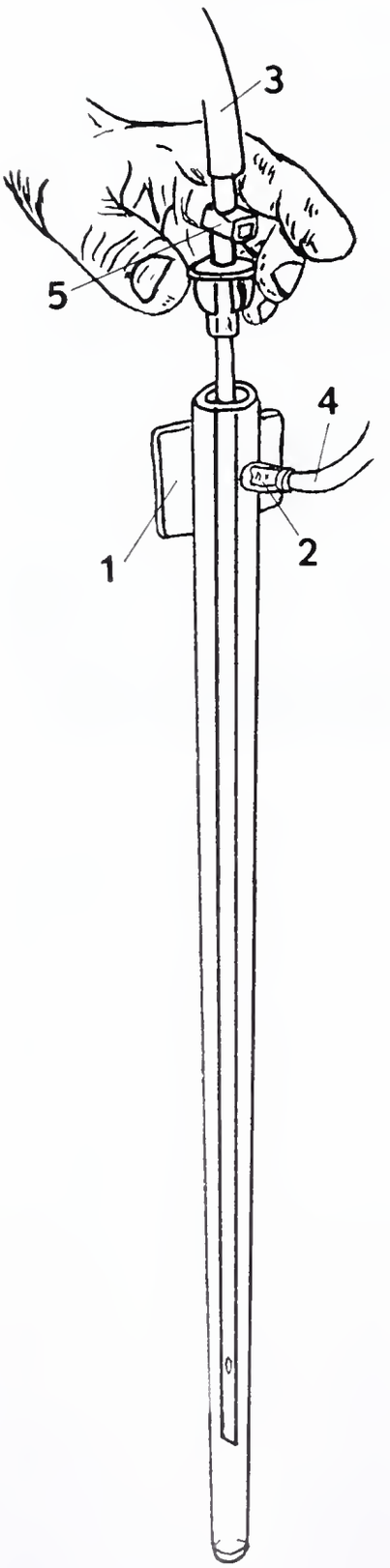
Economic Considerations

The escalating cost of health care has gained increasing attention by the press in recent years, especially since the increase in federally funded programs. Health care in the United States now approximates 8.7% of the gross national product, and expenditure for suction catheters now exceeds $15 million per year. This cost has risen annually with the increased employment of the one-use disposable catheter technique. Little attention has been given to this important aspect of patient care by professional health care personnel.

Description of the Suction Catheter Unit

Based on the review of others' experiences as described in the literature, a method for suctioning should incorporate (1) prevention of cross-contamination, (2) simplicity and efficiency in its use, and (3) economy.

1. Details of suction unit: (1) adhesive sponge wall mount, (2) Luer adapter side arm, (3) suction hose, (4) standard IV set connected to sterile bottle of saline solution, and (5) air port.



Personal investigation of techniques used in more than 50 hospitals throughout the country in the past three years has disclosed the following facts concerning suctioning technique:

1. No standard technique is now being followed; technique even varies among different services within the same hospital.

2. Rigid aseptic technique is time consuming and is frequently not adhered to, especially during periods of high work load and in patients requiring frequent suctioning.

It appears that the major problem is one of cross contamination, and increasing complexity of the technique increases the possibility of breaks in technique, accidental or intentional.

I have developed a new device which combines the requirements of simplicity of use, cost reduction for the patient, and prevention of cross contamination. Establishment of a standard technique using this type of device would be of additional value in more accurately assessing sources of infection.

The device (Fig 1) incorporates the following: (1) a wall-mounted receptacle, (2) a suction catheter with a cover incorporated into the top portion, and (3) a Luer adapter side arm for attachment of a standard intravenous set with sterile irrigating solution. A one-glove technique is recommended, and the procedure requires only that the nurse don a sterile glove before suctioning for handling the soft catheter portion. After suctioning, the catheter is replaced in the receptacle and rinsed with sterile solution by opening the IV administration set. The solution is suctioned from the receptacle and maintained in a dry state between periods of suctioning. The unit may be then used for an extended period, this being left to the discretion of the physi-

Single use catheter technique:		
Catheter cost		$ 0.40
Average no. catheters used per 24 hours		20
$0.40 x 20 x 7 days	=	$56.00
Catheter unit technique:		
Day 1:		
Unit cost		$ 3.95
IV adminstration set		0.83
2 bottles saline		2.00
Total		$ 6.78
Days 2-7:		
2 bottles saline x 6 days		$12.00
Total weekly cost		$18.78
Savings:		
$56.00 — $18.78	=	$37.22
$37.22 / $56.00 x 100	=	66.46% saving

2. Sample cost comparison between single-use catheter technique and catheter unit technique.

cian. The unit is provided with a wall mount of adhesive sponge on the upper end of the receptacle. Objections have been raised that the receptacle provides a culture medium for bacteria. If properly used, the unit should contain only those organisms already present in the tracheostomy tube and/or tracheobronchial tree. Flushing with sterile solution with each use and maintenance of a dry receptacle between uses, tends to minimize the growth of bacteria. This is less conducive to bacterial growth than the tracheal tube which is bathed in mucus and accessible to contamination by the patient and nursing personnel.

Because the technique of using this device is simple, opportunities for breaks in technique are reduced.

This unit has been used in 25 hospitals during the past year without complaints of increased problems with infection. A retrospective review of the experience in the study hospital has not presented any problems with infection, and the unit has gained a high degree of acceptance by the nurses and respiratory therapists. Use of the unit has been restricted to patients admitted to the 12-bed intensive-cardiac care unit, and 18 patients have been treated with this system.

The patients had a mean age of 55.9 years with a range of 2 to 78 years. Half the patients treated were over the age of 70. The average duration of use of the unit was 16.2 days with a range of 2 to 70 days. The suction device was transferred from the ICU with the patients if they required suctioning after leaving the unit.

Nine patients in the series had tracheostomies and an additional four had laryngectomy stomas. Three patients had indwelling endotracheal tubes. Four patients died during use of the unit. Three of these

patients had clinical pulmonary infection on admission. Two of the deaths were caused by drug overdosage and the other two, both in elderly patients, were due to cerebrovascular accident and spontaneous pneumothorax with cardiac arrest. There were no infections attributable to the use of the suction unit.

Fig 2 is a sample cost comparison using the catheter unit versus the one-use catheter routine for one week in a fairly typical ICU situation. Inquiry in a number of ICUs revealed that a patient requiring suction required 15-25 aspirations in a 24-hour period. The cost of gloves is not included because a one-glove technique is recommended for both procedures. Prices of saline, etcetera, are approximate and will vary in different hospitals and geographical areas.

Summary

Perpetuation of a procedure which has been shown to be ineffective in decreasing the incidence of infection seems unwarranted. When incorporating infection control procedures, the human element must not be ignored. With the increasing work load in hospitals, and the difficulty of obtaining well-trained personnel, simplicity of technique should contribute to a decrease in incidence of infection created by cross contamination. Escalating health care costs will come under closer scrutiny in the future and methods of reducing costs will better serve the patient and the hospital as long as it does not increase the morbidity or prolong the hospital stay. The described method of suctioning has been developed to serve this purpose and additionally to attempt to establish an effective, yet simple and safe, standard technique.

References

1. Meade JW: Tracheostomy—its complications and their management. N Engl J Med 265:519-523, 1961.

2. Gotsman MS, Whitby JL: Respiratory infection following tracheostomy. Thorax 19:89-96, 1964.

3. Larson E: Bacterial colonization of tracheal tubes of patients in a surgical intensive care unit. Nurs Res 19: 122-128, 1970.

4. Lowbury EJ, Thom BT, Lilly HA, et al: Sources of infection with *Pseudomonas aeruginosa* in patients with tracheostomy. J Med Microbiol 3:39-56, 1970.

5. Sutter VL, Hurst V, Grossman M, et al: Source and significance of *Pseudomonas aeruginosa* in sputum. JAMA 197:854-858, 1966.

6. Bluemle M: Tracheal bacterial counts of patients following suctioning. Nurs Res 19:116-121, 1970.

7. Bryant LR, Trinkle JK, Mobin-Uddin K, et al: Bacterial colonization profile with tracheal intubation and mechanical ventilation. Arch Surg 104:647-651, 1972.

8. Rogers LA, Osterhout S: Pneumonia following tracheostomy. Amer Surgeon 36:39-46, 1970.

John S. Carleton, MD, 1015 Ellis Ave, Lufkin, TX 75901.

Improved continuing education through decentralized family physician education

Joseph M. Merrill, MD; Fred M. Taylor, MD; G. Anthony Gorry, PhD

In an earlier article,[1] we proposed a method for increasing the number of family physicians in Texas based on the concept of decentralized residency training. We suggested that a number of cities away from medical schools and major metropolitan areas become centers for postgraduate education in primary care. If a new physician is to develop primary care skills effectively in any program, he must have dedicated teachers during his residency. He must be trained in an environment in which many patients seek help for a wide range of primary care medical problems, and receive high-quality, comprehensive, continuous care. Appropriate opportunities must be available for the primary care physician-in-training to interact with specialists concerning patients under his care. These components, faculty and patients, are the prerequisites for a high-quality primary care training program.

Academic health science centers have created such environments through establishment of family practice or other primary care units closely connected to existing secondary and tertiary facilities. An alternative approach is to base primary care training programs in communities remote from the medical school by developing and maintaining close links between the remote training sites and the medical schools. Provided that faculty and patients are available, significant decentralization of primary care training to remote training centers can be effected and some important additional benefits to medicine achieved.

These "remote" centers are the logical sites for continuing education activities and should become the backbone for strong continuing education programs throughout Texas. Artificial breaks should be minimized in the life-long education of physicians, and these centers would help coordinate continuing education with undergraduate and graduate training. This additional role for these centers is essential if a better geographic and specialty distribution of physicians in Texas is to be achieved.

A graduate training center increases the attractiveness of an area for physicians to settle in. This was recently emphasized in an analysis of physician distribution in the United States.[2] A physician should have available the same tools for his practice which he had in his training. The availability of good support personnel and facilities has significantly increased the probability that a graduate will go into urban practice. We believe that rural practice can be made attractive to more physicians. It is well-known that where excellence has been developed outside dense urban areas, such as at the Mayo Clinic and at the Scott and White Clinic, high-quality medicine has flourished and many physicians who train in such facilities stay to practice in these areas. Through their comprehensive education programs, the centers that we are proposing, geographically remote from, but strongly linked to academic health science centers, should overcome one of the principal disincentives to rural practice.

Community Involvement

For such a program to succeed, it must have community support and involvement. Local initiative in organizing and managing a continuing education program in conjunction with one in postgraduate education is paramount to the success of the effort. Many individuals and institutions must become involved—leaders of the profession, county medical societies, local and state government, community colleges, and the affiliated academic health science center. An educational center should serve an area

large enough to provide a population base to support programs of primary care education. At the same time, the communities involved with such a center should be close enough to the center so that its programs and services are readily accessible to the physicians and citizens. Additionally, relationships should be established with the outlying communities in order to augment their continuing education resources. Properly developed, a center will become an important activity in the community's existing medical resources and relationships. Further, the center will be helpful in developing and maintaining quality programs of allied health education to meet the needs of the surrounding community.

Director

While the success of a center will depend on many different constituencies, the principal initiative will come from its local director. He or she will be expected to initiate, organize, and coordinate the essentials of the continuing education program—hence, the job will not be an honorary one, but will require considerable effort. The director's enthusiasm and drive will be instrumental in assuring the success of the program. He or she must be an able teacher of clinical medicine as well as a leader, able to mobilize local support for the center and to insure that the center meets the needs of the community. It is therefore highly desirable that he or she be a physician with considerable experience in the community. In some instances it may not be feasible to develop and sustain a superior program with only one full-time faculty member, and additional support will be required. The importance of the director's role should be explicitly acknowledged and recognized by the affiliated academic health science center.

Local Faculty

Strong advocacy and leadership by the local medical community is essential. For the program to succeed, it must develop a local faculty dedicated to the support of an academic program of highest quality. For the most part, these teachers will have to be drawn from the physicians of the community. They will receive intellectual support from the faculty of the affiliated academic health science center. Physicians in the community, chosen for their interest in participating in an educational program, their teaching skills, and the relevancies of their practices, should be appointed to the faculty of the affiliated medical school.

It should be clearly understood that the community is not simply the site of an education center: it will also, in the long run, provide most of the leadership in the educational program. The local faculty can provide a comprehensive educational experience in primary care as well as several different primary care role models for prospective physicians. For both students and residents, this faculty can furnish opportunities for broadened clinical experiences extending to home settings and facilities for the care of convalescents, the chronically ill, and the mentally ill. For a center to succeed, the local physicians must have a strong commitment to the training program. A major benefit for the local faculty will be their own continuing education, for teaching always involves learning. In addition, education programs generally attract physicians to practice nearby, and the community benefits. For the state as a whole, decentralized programs will further interest medical students in family practice, there-

by increasing the number of physicians likely to practice in underserved areas.

Facilities

An educational center should be the focal point for these cooperative educational activities and should serve as the medical intellectual center for the community. It should be sufficiently distinctive to be easily recognized as a center, and probably should adjoin the major community hospital. Classroom space, conference rooms, demonstration areas, audiovisual equipment, and an office for the director should be provided. In addition, housing would be needed for residents and students who are participating in the educational program at the center.

Academic Health Science Center Commitment

The academic health science centers in Texas ought to exercise leadership in initiating this program, but for the program to flourish its local and regional character should be paramount. The medical school would be helpful in organizing the program, recruiting residents, and providing continuing support to assure the high quality of training. Both medical students and resident physicians from the medical school could rotate through these centers. Faculty from the medical school would visit the educational center to conduct rounds and seminars. These linkages would help the academic health science center to better understand the needs of family practice and primary care, and thereby help the university centers to do a better job. As the educational program matures, it should be extended to meet the needs of nursing students and other allied health students.

Evaluation

Continuing education programs currently are under attack because their values often cannot be quantitated. The program proposed here would provide ample opportunity to evaluate the extent to which a grass roots continuing education program would improve the distribution of physicians both by specialty and by geographic area in Texas. Other program objectives that would lend themselves to evaluation are expanding training opportunities in primary care, encouraging medical students to pursue careers in primary care, and increasing training opportunities for allied health personnel. Also, because of the involvement of practitioners, this program would help identify and avoid the problems that have caused many previous continuing education attempts to fail.

Discussion

Why should the medical profession in Texas be concerned with a major effort in continuing education? Medicine changes, and some form of continuing education is the means by which the latest advances are brought to the majority of practitioners. Without access to a strong program in continuing education, it is difficult for a physician to maintain uniformly high professional standards throughout a career. The decentralized centers of primary postgraduate medical education would be the logical sites for continuing education because of their intimate association with family practice. We believe that for the most part, family practitioners know what they need in the way of education to improve their practices. The director of the proposed program, together with his advisory committee, would orient the curriculum to the major problems identified by

these physicians. As the local physicians become more involved in teaching family practice and in demonstration in residency training, their own self-education will be enhanced. Not only would these education efforts improve the quality of the experience offered to students and resident physicians, but they would greatly facilitate the local development of continuing education programs for physicians and allied health personnel.

One of the greatest shortage areas in current academic medicine is a faculty to teach family practice. The medical schools in the state probably need three or four times as many teachers in primary care as they have now. The type of program that we envision offers an opportunity for training teachers for family practice throughout Texas.

There is another important reason for supporting the development of strong continuing education programs in these centers. Recent moves toward relicensure, recertification, and medical audits increase the dangers of elaborate bureaucratic procedures such as the PSRO. The latter federal legislation was derived from hearings before the Senate Finance Committee in which it was said that a significant proportion of health services were not medically necessary and some did not meet quality standards. The legislation passed, and the federal government is proposing to determine the medical necessity and appropriateness of hospitalization of patients; to define the quality of hospital care by "measuring process and outcome," and to compare the patterns of care and facility utilization among patients, physicians, and institutions. Nonphysicians, "review coordinators," have been proposed to develop "norms" regarding length of stay by diagnosis, physical findings, and appropriate review of the patient after admission to the hospital to justify continuing hospitalization. The present estimate of costs for this program is $90 million based on an expenditure of $30 billion on Medicare and Medicaid. The costs associated with the supporting review committee of hospitals have not yet been identified. HEW is trying to market this program as one to improve the quality of medical care through physician education.

The medical profession, working with the medical schools in Texas, should be able to come up with a better method for maintaining high standards of medical care than reliance on a Washington-based bureau. A network of training centers linked to the state's academic health science centers would be an important base upon which to build a comprehensive continuing education program to assure continuance of high-quality medical practice in Texas.

Summary

Texas currently needs more family physicians in medically underserved regions. Academic health science centers should stimulate the development of decentralized centers of medical education for primary care and continuing education. These should be developed as cooperative endeavors between the practicing communities and the medical schools. These new centers not only would augment the state's capacity for primary care training, but they would also encourage newly qualified primary care physicians to practice in areas of the state that are currently underserved. Furthermore, this program would enable the profession to continue to excel in quality care without the development and influence of yet another federal program.

References

1. Gorry GA, Merrill JM: One method for increasing the number of primary care physicians in Texas. Tex Med 73(4):90-96, 1977.

2. Coleman S: Physician distribution and rural access to medical services. Rand Corporation Report, R-1887-HEW, April, 1976.

Joseph M. Merrill, MD; Fred M. Taylor, MD; G. Anthony Gorry, PhD, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030.

Information for authors

Texas Medicine is a scientific, clinical journal published primarily for members of the Texas Medical Association. In addition, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, coming meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1905 North Lamar Blvd., Austin 78705. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Scientific Articles
Manuscripts should be typed double-spaced with ample margins on firm paper. Two copies should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

References
Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrative Material
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously Published Material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with the manuscript.

Editorials
Editorials should be prepared in the same general manner, and should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the Managing Editor and consultants.

News
News items should be sent to the Editorial Offices, 1905 North Lamar Blvd., Austin 78705.

Continuing Education, Meetings
Continuing education courses and medical meetings are listed in each issue. Information about courses should include title, sponsor, location, dates, duration, fee, how many may enroll, for whom the course is designed, teaching methods, type and number of hours credit, and name and mailing address of a person to contact.

Information about meetings should include the name of the organization, place and inclusive dates, and name and mailing address of a person to contact. Program topics and names of speakers may be included as space permits.

Material should be submitted in writing six weeks before publication; for example, information for the June issue (published June 1) is needed by April 15.

Obituaries
Obituaries of deceased TMA members are published if adequate information is received within four months of date of death. When notifying the editors of a member's death, please give the name and address of next of kin.

Policy on Columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Scientific Publication Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the Committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the Managing Editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

Nursing education in Texas

During the past 15 years, nursing education in Texas has experienced increasing growth. Enrollment in the last decade has grown from approximately 3,400 students to nearly 14,000 this past fall.

Four different types of nursing programs produce nurses at the undergraduate level in Texas. Nursing education includes the diploma programs, the associate degree in nursing, the bachelor of science in nursing, and the RN-BSN program.

Diploma programs

The oldest form of nursing education, the diploma programs, requires one year of college courses and two years of lecture and clinical courses. There are six diploma programs in Texas in Amarillo, Abilene, Austin, San Antonio, Lubbock, and Tyler.

Associate degree in nursing

The first associate degree program (ADN) in Texas was established in 1960, and there are 30 in operation today. Five are in universities, and the other 25 are in community colleges.

The ADN program is two years in length, and the students take liberal arts, science, and nursing courses in the concentrated program.

Bachelor of science in nursing

The BSN programs are sometimes referred to as "generic" to distinguish them from the RN-BSN option programs which have begun to emerge in Texas during the last two years.

The typical generic BSN program consists of two years of pre-professional (pre-nursing) preparation plus two years of upper-division nursing courses. There is variation from this format at some institutions, but most of them fit this description.

The number of generic BSN programs, both public and private, has increased from 7 in 1960 to 16 in 1976.

RN-BSN program

The RN-BSN program is a specifically designed curriculum. For many years, most generic BSN programs have admitted registered nurses who had completed an associate degree in nursing or a diploma program, and most of the programs permitted the RN to challenge the nursing courses by examination. The RNs were required to take those courses not challenged successfully and to meet all other degree requirements. RNs frequently object to taking courses in the generic curriculum because of their similarity, in some cases, to nursing courses taken previously in lower division studies.

Several generic BSN programs now offer RNs a special track or option to the generic

---

Editor's note: The information on undergraduate nursing education in Texas was prepared by the staff of the Coordinating Board, Texas College and University System and presented by Kenneth H. Ashworth, PhD, Commissioner, at the July 1977 meeting of the Coordinating Board.

curriculum. This is a form of an inverted degree program. That is, traditionally the liberal arts and pre-professional general education courses have been contained in the first two years of the baccalaureate program with the specific nursing programs and clinical experiences contained in the last two years. A person holding a two-year degree is often short on the academic courses but has had substantial clinical training. Therefore the sequence of taking some courses has to be reversed in part.

The Coordinating Board, Texas College and University System since 1974 has approved five RN-BSN programs which were specifically based on a model curriculum to admit holders of nursing diplomas or associate degrees in nursing to permit them to acquire baccalaureate degrees. Two of these recently approved programs, those at Corpus Christi State University and Texas Eastern University at Tyler, are being implemented and both programs have produced graduates. The programs and the courses were designed to build upon the basic programs which the students would

NUMBER OF PROFESSIONAL NURSING PROGRAMS IN TEXAS 1960 TO 1976

	DIPLOMA	ASSOCIATE DEGREE	BACCALAUREATE	TOTAL
1960	26	1	7	34
1965	23	4	7	34
1970	14	20	10	44
1971	10	20	10	40
1972	10	22	11	43
1973	7	23	12	42
1974	6	24	12	42
1975	6	27	11	44
1976	6	30	16	52

Source: Board of Nurse Examiners for the State of Texas

have previously completed prior to admission.

All six of The University of Texas Schools of Nursing and the Texas Woman's University College of Nursing have introduced or are currently developing similar programs to admit qualified RNs without a BSN in order to permit such students to acquire a BSN degree.

An unusually well qualified and bright student might upgrade a degree to the baccalaureate level in one year if studying full time at an institution. The usual student will require at least the equivalent of two years of college work while studying full time. Some students will require longer, depending upon the individual and the amount of time devoted to the programs of study. Successful challenge of courses will in all cases shorten the time of study. The fact that a nurse might have spent three years in a diploma program or might have taken three years to complete an associate degree does not result in reducing the time required for a bachelor's degree to one year of study.

LICENSING STATISTICS ON TEXAS NURSES

	1971	1972	1973	1974	1975	1976
TOTAL TEXAS REGISTERED NURSES RE-REGISTERED	44,714	46,833	48,910	52,186	55,115	57,823
TOTAL REGISTERED NURSES REGISTERED BY ENDORSEMENT	1,993	1,981	1,943	2,050	2,218	2,536
TOTAL GRADUATE NURSES REGISTERED BY EXAMINATION	1,526	1,923	2,543	2,795	3,377	3,665
TOTAL NURSES REGISTERED IN TEXAS	48,233	50,737	53,396	57,031	60,710	64,024
GAIN OVER PREVIOUS YEAR	——	2,504	2,659	3,635	3,679	3,314

NOTE: ONE-THIRD INCREASE IN FIVE YEARS.

Source: Board of Nurse Examiners for the State of Texas

Growth enrollments and graduates

Over the past 15 years, the greatest growth of enrollments has occurred in the last decade, moving from approximately 3,400 students to close to 14,000 this past fall.

Growth of nursing in Texas

There are 64,024 registered nurses holding Texas licensure in 1976, but only 43,403 of them actually resided in the state. Of that number of nurses in Texas, almost 12,000 were either retired or inactive, leaving 30,558 in active practice.

Of the active RN workforce in Texas, 25,441 (83%) worked full time, and 5,117 (17%) worked part time.

The total number of nurses registered in Texas has been increasing by more than 3,000 each year. This increase comes from several sources, including those moving to Texas from other states and those licensed by examination who are graduates of Texas schools of nursing.

Effect of the increasing number of RNs

The increasing number of programs, increasing enrollments and graduates, and in-migration have mitigated the shortage of RNs that existed in Texas in the mid 1960s.

However, there is an increasing concentration of RNs in the urban areas, and the rural areas remain underserved. That is, Texas suffers the same problem of maldistribution of nurses that it does with physicians.

Looking at the ratio of RNs per 100,000 population, we find the situation has improved in Texas. In 1966, there were 188 active RNs per 100,000 population in Texas. Today, that number is 246 RNs per 100,000 population.

Faculty supply and demand

In the 1976 fall semester, there were 916 faculty employed in the 52 nursing programs in Texas. Those faculty were responsible for teaching nearly 14,000 nursing students enrolled that semester. A rough estimate of the ratio of students to faculty is about 15 to 1, which is more than twice the desirable standard of the Board of Nurse Examiners. This indicates a very clear need for increasing the number of qualified faculty for our nursing programs.

At the same time that we already face a shortage of nursing instructors, efforts are underway to improve faculty standards. The Board of Nurse Examiners has increased the minimum faculty requirement for teaching to a master's degree or its equivalent with this requirement to go into effect in 1980. Of the 916 faculty members currently teaching, at least 270, or almost 30%, do not now meet the new minimum standards of the Board of Nurse Examiners. In addition, there were 54 known budgeted vacancies in our nursing schools in the current year.

The implementation of the recently authorized program at Stephen F. Austin State University was delayed due to a shortage of faculty.

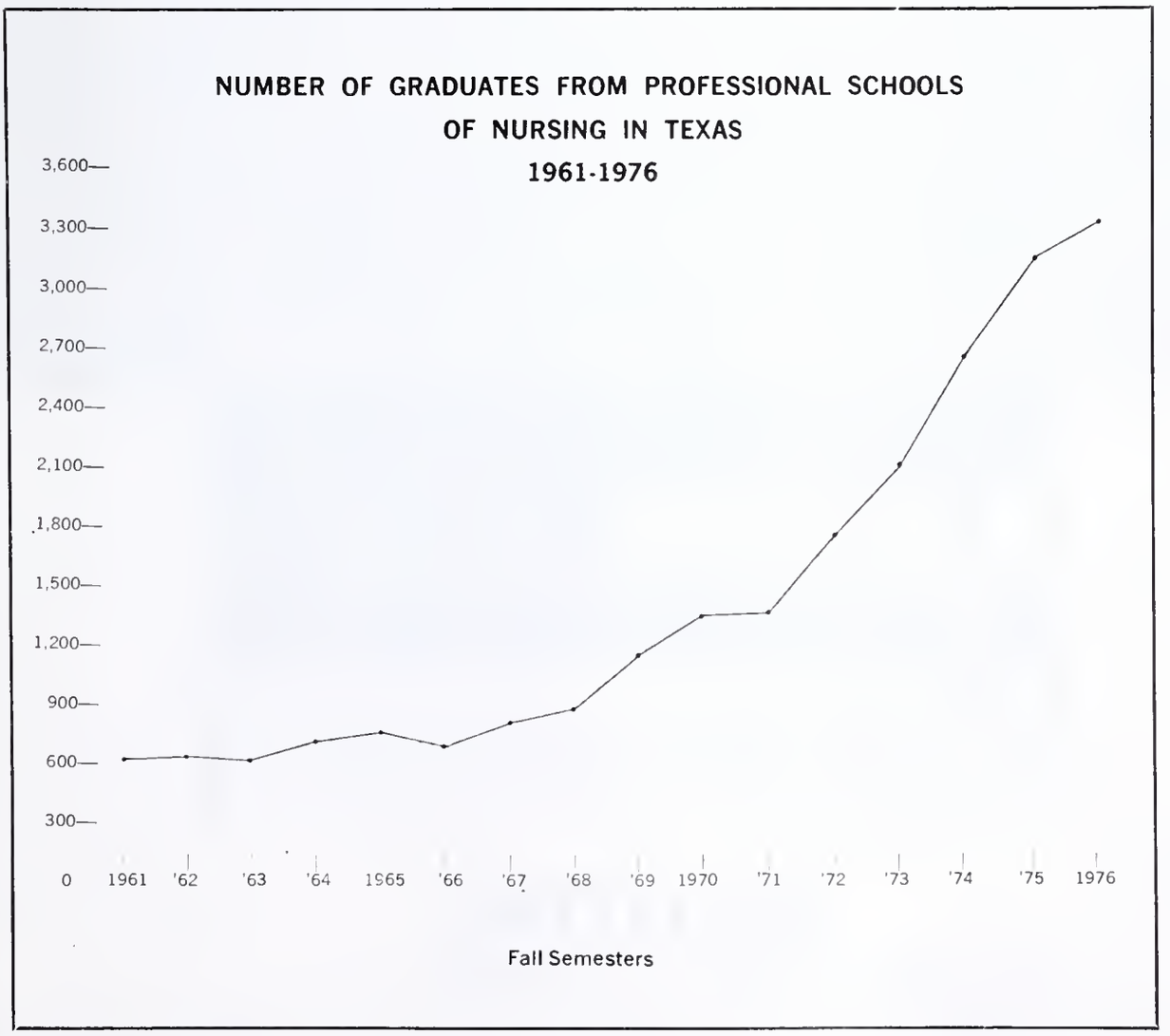
One of the problems very related to the qualifications of faculty is the significant number of students who fail to pass the State Board test pool examination on the first try. Some of these failures are due to the student, but we must assume that by improving the quality of faculty, performance on these tests would improve.

The ADN graduates had a 72% passing rate, while the baccalaureate graduates had an 84% passsing rate, and diploma graduates had a 90% passing rate. All of these were for students taking the exam for the first time.

Summary

I believe from this progress report several items are evident:

1) We have significantly increased the capacity for educating undergraduate nurses of all types in Texas;
2) Major efforts will be required to upgrade the educational level of faculty members in our existing colleges and universities;
3) Programs which have been authorized to be implemented and existing programs still have budgeted positions for which they cannot find qualified faculty members;
4) It is essential to maintain a focus upon quality in our educational programs since a significant number of graduates are still failing to pass the basic licensure examination;
5) We have many options available for upgrading the degree level of nurses, but we must be careful to maintain quality even when we expand nursing programs into areas of the state where need is clearly demonstrated; and
6) Any expansion should be carefully considered for the impact that it will have on existing and previously authorized programs.



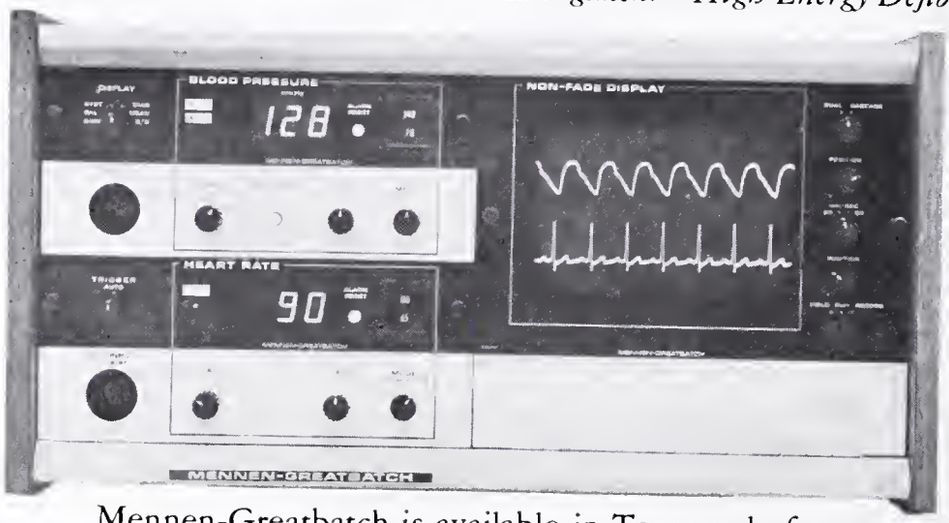
GENTEC FEATURES A TEXAS EXCLUSIVE: MENNEN-GREATBATCH CLINICAL AND DIAGNOSTIC SYSTEMS

Invest in a Mennen-Greatbatch instrument or system from Gentec Hospital Supply and you get more than the leading patient monitoring equipment.

Gentec can assist you with complete department planning and layout, system design and integration, architectural and electrical outlines, educational aids and programs.

And when your MG equipment goes to work, Gentec backs it with 24-hour service and complete warranty coverage.

See Gentec for the complete line of Mennen-Greatbatch systems, including:
Telemetry Monitoring · Microprocessors In-Patient Monitoring
Computer-Assisted Cath Lab · Data-Base Management · High-Energy Defibrillators



Mennen-Greatbatch is available in Texas only from

Gentec
HOSPITAL SUPPLY COMPANY
Division of Foremost-McKesson, Inc. Terrell Supply Division

FORT WORTH/DALLAS, P.O. Box 310 76101, (817) 336-8731, (214) 429-2566 / AMARILLO, P.O. Box 1587 79106, (806) 376-4696
AUSTIN, P.O. Box 4415 78723, (512) 478-2559 / LUBBOCK, P.O. Box 2913 79408, (806) 763-4655 / SAN ANTONIO, P.O. Box 32107 78216, (512) 344-0213 / HOUSTON, P.O. Box 1609 77001, (713) 237-9678

Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

■ **Most Widely Prescribed**—Antivert is the most widely prescribed agent for the management of vertigo* associated with diseases affecting the vestibular system such as Menière's disease, labyrinthitis, and vestibular neuronitis.

■ **Relief of Nausea and Vomiting**—Antivert/25 can relieve the nausea and vomiting often associated with vertigo.*

■ **Dosage for Vertigo***—The usual adult dosage for Antivert/25 is one tablet t.i.d.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25

(meclizine HCl) 25 mg. Tablets
for vertigo*

GET MOVING, AMERICA!

It feels good to feel fit
physically, mentally, emotionally.
So learn a skill you can play for life.

Sponsored by
American Alliance for Health, Physical Education and Recreation
1201-16th Street, N.W., Washington, D.C. 20036

AAHPER

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

Warning
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Indications: When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome, Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Preeautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis.

'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

FOR LONG-TERM CONTROL OF HYPERTENSION.* SERUM K^+ AND BUN SHOULD BE CHECKED PERIODICALLY. (SEE WARNINGS SECTION.)

SK&F CO., Carolina, P.R. 00630

SK&F CO.
a SmithKline company

B.W.CO.® HAS PUT MORE POTENCY IN THE LINE

EMPRACET® with Codeine Phosphate, 60 mg, No. 4 Ⓒ III

EMPRACET® with Codeine Phosphate, 30 mg, No. 3 Ⓒ III

CONTRAINDICATIONS: Hypersensitivity to acetaminophen or codeine.

WARNINGS: Drug dependence. Codeine can produce drug dependence of the morphine type and may be abused. Dependence and tolerance may develop upon repeated administration; prescribe and administer with same caution appropriate to oral narcotics. Subject to the Federal Controlled Substances Act.

Usage in ambulatory patients. Caution patients that these products may impair mental and/or physical abilities required for performance of potentially hazardous tasks such as driving a car or operating machinery.

Interaction with other CNS depressants. Patients receiving other narcotic analgesics, general anesthetics, phenothiazines, tranquilizers, sedative-hypnotics, or other CNS depressants (including alcohol) may exhibit additive CNS depression; when used together reduce dose of one or both.

Usage in Pregnancy. Safe use is not established. Should not be used in pregnant patients unless potential benefits outweigh possible hazards.

PRECAUTIONS: Head injury and increased intracranial pressure. Respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a pre-existing increase in intracranial pressure. Narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.

Acute abdominal condition. These products or other narcotics may obscure the diagnosis or clinical course of acute abdominal conditions.

Special risk patients. Administer with caution to certain patients such as elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, or prostatic hypertrophy or urethral stricture.

ADVERSE REACTIONS: Most frequently include lightheadedness, dizziness, sedation, nausea, and vomiting; more prominent in ambulatory than in nonambulatory patients; some may be alleviated if patient lies down; others include: euphoria, dysphoria, constipation and pruritus.

DRUG INTERACTIONS: CNS depressant effect may be additive with that of other CNS depressants. See Warnings.

For symptoms and treatment of overdosage and full prescribing information, see package insert.

Introducing EMPRACET® c̄ CODEINE #4

Each tablet contains: codeine phosphate, 60 mg (1 gr) (Warning—may be habit-forming); and acetaminophen, 300 mg.

Ⓒ III

Our new non-aspirin/ codeine analgesic for moderate to severe pain.

New peach-colored Empracet c̄ Codeine #4 offers a potent alternative for patients in whom aspirin is not indicated.

Unlike compounds containing oxycodone which afford comparable analgesia, new Empracet c̄ Codeine #4 gives you CIII prescribing convenience—up to 5 refills in 6 months at your discretion (where state law permits). And, prescribing by telephone is permissible in most states. Moreover, new Empracet c̄ Codeine #4 has less addiction potential than does oxycodone.

For those of your patients requiring a less potent analgesic, non-aspirin Empracet® c̄ Codeine #3 provides effective relief of moderate pain.

Burroughs Wellcome Co. makes codeine combination products. You make the choice.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Why Texas physicians are dropping out of the Medicaid program

What makes Texas physicians drop out of the Medicaid program?

A reimbursement rate that is too low, excessive paperwork, and delay in getting payment are just some of the reasons doctors answered in response to a letter sent to 1,200 physicians by the Texas Medical Association. The letters were mailed June 8, 1977, and as of June 29, 1977, responses were received from 77 physicians.

The letter was sent at the request of the Committee on Physician Participation in the Texas Medicaid Program of the Texas Department of Human Resources (formerly the Texas Department of Public Welfare).

The committee analyzed the responses, after the physicians were asked to provide their views on physician participation in the Medicaid program.

Fee reimbursement

The primary reason that physicians gave for declining participation is fee reimbursement.

The secondary reason was "paperwork hassle." Other reasons included Medicaid not paying claims, the lack of responsibility of recipients in keeping appointments and following medical treatment plans, and the 90 day filing deadline.

Physicians responding indicated that the rate of reimbursement was ridiculously low. All of the physicians responding gave the reimbursement rate and the "paperwork hassle" as reasons for dropping out of the program.

Other reasons included problems with the intermediary in not replying to inquiries, arbitrariness, restrictive guidelines, and presumption of government and intermediary administrators that physicians are basically dishonest. Physicians responded that another factor is the publicity given to investigations rather than to the amount of time dollars actually contributed to the program by the physicians.

The lack of responsibility by Medicaid recipients in keeping appointments and in following the medical treatment plan prescribed often results in physicians spending more time with Medicaid recipients than with other patients, but receiving less pay for doing so, the physicians reported.

Committee goals

In performing the survey and other studies the Committee on Physician Participation in the Texas Medicaid Program is looking to answer two questions: "What are the reasons that more physicians are not participating in the Medicaid program?" and "What changes should be made in the Medicaid program that would encourage more physicians to accept Medicaid patients?"

The committee has reviewed the report developed by the Task Force for the Evaluation of Medicaid in Texas and discussed the developments with the Department of Health Resources regional administrators and directors of medical assistance units.

In reviewing the report of the Task Force for the Evaluation of Medicaid in Texas, the committee found that Medicaid recipients are encountering extreme difficulties in finding physicians who will accept Medicaid. There are areas in the state where Medicaid recipients must travel considerable distances to find a physician who will

accept Medicaid, the committee concluded.

In Houston, San Antonio, Dallas, and other metropolitan areas, it is not uncommon for Medicaid recipients to have to travel across town to the city/county hospital outpatient clinic to obtain service because they are unable to find physicians who will accept Medicaid, the committee reported.

Committee recommendations

The committee findings indicate that physicians have been alienated and it is going to be extremely difficult to get physicians back into the Medicaid programs.

The committee recommended that immediate consideration be given to several areas to deal with problems in the Medicaid program.

The committee recommended that alternative methods of reimbursement of physicians be reviewed. The committee also recommended that the Department of Health Resources and the National Health Insurance Company review programs to improve paperwork and payment procedures.

Another recommendation is that resource persons be assigned to answer Medicaid questions. The committee recommended that the Medicaid program be presented to physicians by a physician on a regularly scheduled basis.

Improved recipient education on Medicaid usage and benefits was another committee recommendation.

The committee also recommended that the requirement for physicians to see nursing home patients every 60 days be reviewed. The committee recommended discontinuing publishing the list of Medicaid providers.

The committee recommended that a positive publicity campaign be conducted explaining the services provided by physicians to Medicaid recipients.

Why Texas physicians are dropping out of the Medicaid program

1. reimbursement rate too low
2. excessive paperwork and delay in getting payment
3. dissatisfaction with limit of two office visits per month without lengthy justification
4. Medicaid would not pay claims
5. lack of responsibility of recipient in keeping appointments and following medical treatment plans
6. 90 day filing deadline
7. adverse effect on cash flow
8. resent government publishing list of physicians making certain amounts from Medicaid or Medicare
9. procedure codes are being arbitrarily changed by carrier and payment reduced
10. dictatorial attitude of government employees about program

Lifesaving Partnership... Against Cancer Quackery

The anguish associated with cancer is compounded by the cancer quack. False hopes—harmful delays—devastating expenses—deceptive diagnoses—loss of life—these are hazards facing the cancer patient desperate enough to seek a cancer quack.

The problem: how to divert the patient from this tragic encounter.

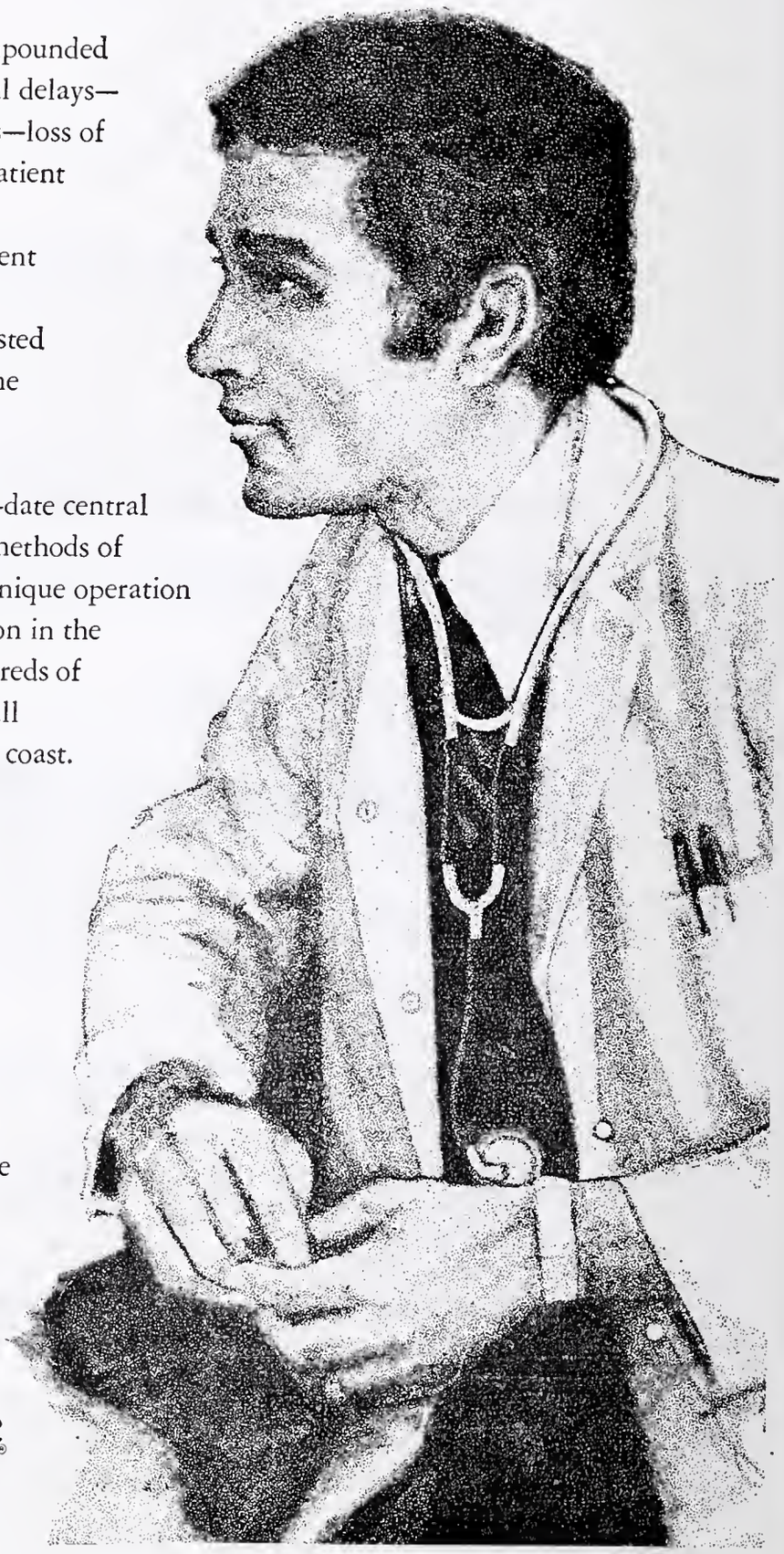
As medical guide, family counselor, trusted friend—you, *doctor,* play a major role in the fight against cancer quackery.

We are here to serve as your partner.

Our National Office maintains an up-to-date central clearinghouse for materials on unproven methods of cancer diagnosis and treatment. This is a unique operation and the principal source of such information in the country. Its services are widely used. Hundreds of inquiries are received and answered from all segments of the community, from coast to coast.

To trigger grass-roots action, we have formulated a model State Cancer Remedy Act designed to control the promotion and sale of unproven methods of cancer management. This has helped to inspire some 20 states to enact or consider legislation against cancer quackery—with active support from the medical community. Copies of the model act, as well as copies of laws in effect, are available through our National and Division offices.

In these actions against cancer quackery, as in all our efforts against cancer, ours is a lifesaving partnership.



American Cancer Society

Texas Division Inc.
P. O. Box 9863
Austin, Texas 78766

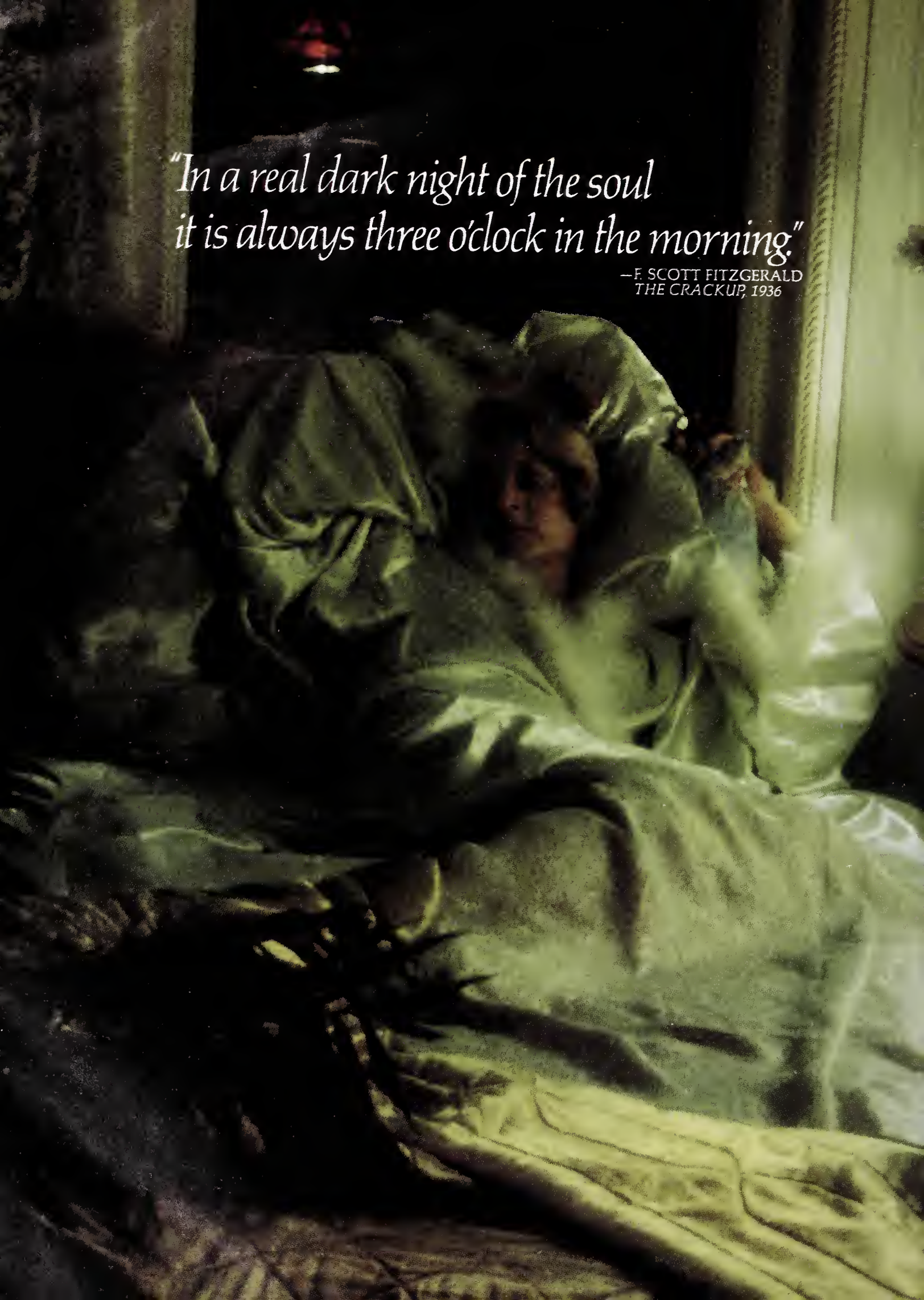
©1977 THE UPJOHN COMPANY 7,6874-6 SEPTEMBER 1977

Upjohn

Orinase®

tolbutamide, U.S.P., Upjohn

0.5 Gm tablets


"In a real dark night of the soul
it is always three o'clock in the morning."
—F. SCOTT FITZGERALD
THE CRACKUP, 1936

Insomnia
a shade of blue that often accompanies depression

And, in anxiety/depression, Adapin® (doxepin HCl) often helps restore disturbed sleep patterns, such as early morning awakening, with a single daily dose at bedtime.[1] Adapin quickly relieves the patient's anxiety, gradually brightens his mood and outlook, with optimal antidepressant response usually evident within two to three weeks.

1. Goldberg HL, Finnerty RJ, Cole JO: Doxepin. Is a single daily dose enough? *Am J Psychiatry* 131: 1027-1029, 1974

Brief Summary of Prescribing Information
ADAPIN® (doxepin HCl) Capsules

Indications—Relief of symptoms of anxiety and depression.

Contraindications—Glaucoma, tendency toward urinary retention, or hypersensitivity to doxepin.

Warnings—Adapin has not been evaluated for safety in pregnancy. No evidence of harm to the animal fetus has been shown in reproductive studies. There are no data concerning secretion in human milk, or on effect in nursing infants.

Usage in children under 12 years of age is not recommended. MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with this drug, as serious side-effects and death have been reported with the concomitant use of certain drugs and MAO inhibitors.

In patients who may use alcohol excessively potentiation may increase the danger inherent in any suicide attempt or overdosage.

Precautions—Drowsiness may occur and patients should be cautioned against driving a motor vehicle or operating hazardous machinery. Since suicide is an inherent risk in depressed patients they should be closely supervised while receiving treatment. Although Adapin has shown effective tranquilizing activity, the possibility of activating or unmasking latent psychotic symptoms should be kept in mind.

Adverse Reactions—Dry mouth, blurred vision and constipation have been reported. Drowsiness has also been observed.

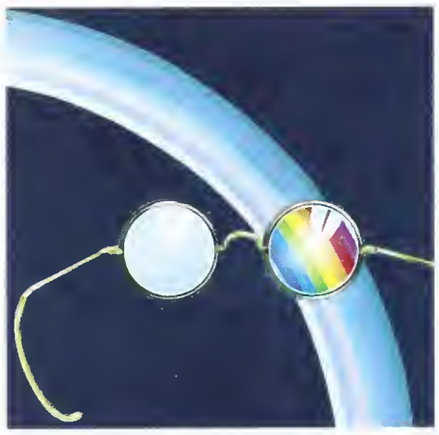
Adverse effects occurring infrequently include extrapyramidal symptoms, gastrointestinal reactions, secretory effects such as sweating, tachycardia and hypotension. Weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash and pruritus may also occur.

Dosage and Administration—In mild to moderate anxiety and/or depression: 10 mg to 25 mg t.i.d. Increase or decrease the dosage according to individual response. **Usual optimum daily dosage is 75 mg to 150 mg** per day, not to exceed 300 mg per day.

Antianxiety effect usually precedes the antidepressant effect by two or three weeks.

How Supplied—Each capsule contains doxepin, as the hydrochloride: 10 mg, 25 mg and 50 mg capsules in bottles of 100 and 1000

For complete prescribing information please see package insert or PDR.



When they see life in shades of blue... help them see life in all its colors.

Adapin®
(doxepin HCl)

single daily dose recommended h.s.

10-mg capsules
25-mg capsules
50-mg capsules

PENNWALT

Pennwalt Prescription Products
Pharmaceutical Division
Pennwalt Corporation
Rochester, New York 14603

LOOK WHAT CPT-4 CAN DO FOR YOU

cpt 4

- ☑ Make reporting your services easier, faster, more precise
- ☑ Reduce your paperwork
- ☑ Improve the accuracy of your record keeping
- ☑ Updates to keep your reporting current
- ☑ Convenient medical reference

The AMA's new 4th Edition of PHYSICIANS' CURRENT PROCEDURAL TERMINOLOGY can do all those things to improve the efficiency of your practice—as previous editions of CPT have done for thousands of physicians. CPT-4 is the most comprehensive and current system available for naming, coding, and reporting medical procedures and services. It contains over 2,000 new or revised procedures.

New Updating Service available at no additional cost! To insure that your CPT stays up to date as new terminology is added, you can receive new and revised procedures on a regular basis. Details in CPT-4 book.

ORDER YOUR COPY NOW.

$12.00 each in U.S., U.S. Poss., Canada, and Mexico

$12.50 all other countries

sg

Order Department
American Medical Association
535 N. Dearborn St.
Chicago, Ill. 60610

Please send me ____ copy(ies) of PHYSICIANS' CURRENT PROCEDURAL TERMINOLOGY, 4th Edition, OP-041. Enclosed is my payment for $_____, payable to AMA.
( ) Please send information on CPT-4 computer tapes.

Name_____

Address_____

City/State/Zip_____

MEDICINE AND THE LAW

TEXAS SUPREME COURT ADOPTS THE REASONABLE AND PRUDENT DOCTOR STANDARD OF CARE IN MALPRACTICE CASE

The Texas Supreme Court has discussed several areas of malpractice law, the most important being the applicable standard of care for a jury to use in deciding whether the conduct of a physician charged with malpractice constituted negligence in the following case.[1]

Facts

The plaintiff-patient suffered from emphysema, and on the recommendation of his physician underwent carotid body surgery. Having obtained no relief, the plaintiff filed suit alleging that this surgery was not a medically accepted method of treatment for emphysema, and that his physician had not adequately warned him of the surgery risks.

The defendant-doctor testified at trial that he had employed carotid body surgery since 1962 and by 1966 he had performed it between 1200 and 1500 times. He stated that 85% of his patients improved to some degree and only 15% were not helped at all.

However, he acknowledged that the surgery was not generally accepted and was highly controversial within the medical profession.

Three physicians testifying for the plaintiff described carotid surgery as an unacceptable treatment for emphysema and a method not supported by medical evidence. The physicians said the procedure had been tried by a number of physicians, was found ineffectual, and abandoned. One of the physicians testifying considered the procedure not only ineffective, but potentially harmful.

On the issue of informed consent, the defendant-doctor stated that he told the plaintiff about the risk of death, possibility of numbness in the jaw and ear, danger of a heart attack, soreness in the windpipe, and infection of the prostate gland. The patient testified that his doctor did not inform him that 15% undergoing the surgery received no relief, did not mention any possibility of heart problems, and did not inform him that the operation might result in high blood pressure. He insisted that his doctor guaranteed a cure for emphysema.

Rulings

On the issue of standard of care, the Supreme Court held that the standard to be applied in a malpractice case where there are allegations concerning an unacceptable mode of treatment is as follows: "A physician who undertakes a mode or form of treatment which a reasonable and prudent member of the medical profession would undertake under the same or similar circumstances shall not be subject to liability for harm caused thereby to the patient."

On the issue of informed consent, the trial court had held that there was no evidence of a lack of informed consent, and this question was not submitted to the jury. The Supreme Court reversed, holding that the evidence did create a fact question as to whether the physician had satisfied his duty to make a reasonable disclosure to the patient of risks incidental to diagnosis and treatment.

On the subject of medical records, the plaintiff had sought to require the defendant-doctor to produce medical records, reports, and correspondence for patients on which the doctor had previously performed this surgery. The trial court and court of civil appeals quashed subpoenas for these documents on the basis of Article 4447d of the Texas statutes, which exempts records and proceedings of hospital and other peer review committees. The Supreme Court indicated that this statute would not protect these particular types of records, and the trial court should require the doctor to produce them for the plaintiff's inspection.

Discussion

The ruling on standard of care is the most significant aspect of this opinion. The plaintiff did not assert the surgery was negligently performed, but rather that it was negligence to undertake this method of treatment.

The Supreme Court was asked to decide the proper standard of care against which the jury should measure the doctor's conduct in performing a questionable procedure. That question had never been decided

by the Supreme Court, but lower courts in Texas and other states had articulated four possible standards to cover this situation:

(1) The Court of Civil Appeals in the present case had opted for the "respectable minority" standard: "A physician is not guilty of malpractice where the method of treatment is supported by a respectable minority of physicians, as long as the physician had adhered to the acceptable procedures of administering the treatment as espoused by the minority."

(2) The doctor in this case proposed the "reasonable disagreement" standard: "When reasonable surgeons would disagree as to either the need for an operation or the procedure employed, the decision is a matter of surgical judgment, and the surgeon will not be liable even if it subsequently appears that the organ removed was healthy or the operation itself was not needed or was unsuccessful."

(3) Some courts have applied the severe "any variance test," which may be stated "when a particular mode of treatment is upheld by a consensus of opinion among the members of the profession, it should be followed by the ordinary practitioner; and if a physician sees fit to experiment with some other mode, he should do so at his peril."

(4) The "reasonable and prudent doctor" standard as adopted by the Supreme Court is really only a variation of the more general standard that Texas courts have applied in other medical malpractice lawsuits, for example, "what a reasonable and prudent doctor would have done under the same or similar circumstances."[2]

The court rejected the "respectable minority" standard because it might convey to a jury the incorrect notion that the standard for malpractice is to be determined by a poll of the medical profession. The court rejected the "any variance" standard because physicians should be allowed to use their professional judgment in selecting experimental procedures to advance medical science. The "reasonable disagreement" standard and "reasonable and prudent doctor" standard are both intended to preclude liability for the reasonable physician and impose it upon those who act otherwise. The court believed this concept was best conveyed by the language adopted, which should be used whether the mode of treatment is experimental, outmoded, or rejected.

With respect to the issue of informed consent, the court's holding that this should have been submitted to the jury follows established Texas precedent. The doctor testified that a reasonable physician would have informed his patient about the possibility of numbness, heart attack or a stroke, and about the 15% of the patients who received no benefit. The plaintiff's testimony that he was not informed as to these matters created a conflict in the evidence such that the matter should have been given to the jury for a decision.

The part of this opinion requiring the defendant-doctor to produce medical records on prior patients is in line with the court's decision in *Texarkana Memorial Hospital v Jones,* discussed in the July 1977 issue of *Texas Medicine*. That case held that the records and proceedings of various hospital and medical organization committees when concerned with review are not subject to discovery during a trial, but it did not suggest that all information reviewed by these committees automatically became privileged. The documents in question were a part of such committee records, but they were not prepared exclusively as a part of the committee functions, and therefore they were subject to discovery.

Conclusion

The standard of care adopted by the Supreme Court should not operate as a hindrance to justified experimental procedures. The patient-plaintiff still bears the burden of proof in showing that his doctor undertook a form of treatment which a reasonable and prudent member of the profession should not have undertaken under the same or similar circumstances.

In deciding this question, the jury can consider the expertise and means available to the particular doctor, the health of the patient, and the state of medical knowledge. In most cases, expert testimony will be required to satisfy this burden of proof.

Jack D. Maroney and Michael G. Mullen
Brown, Maroney, Rose, Baker & Barber
TMA General Counsel

[1]*Hood v Phillips,* 20 Tex.S.Ct.J. 387, June 29, 1977.

[2]*Snow v Bond,* 438 S.W.2d 549, 550 (Tex. 1969).

[3]551 S.W.2d 33 (Tex. 1977).

Medical Newsmakers

WILBUR BROOKS QUAY, MD, professor at the Waisman Center on Mental Retardation and Human Development, and professor of zoology and endocrinology-reproductive physiology at the University of Wisconsin in Madison, has been appointed professor of anatomy at The University of Texas Medical Branch. Dr Quay has served as the H.H. Rackham predoctoral fellow and instructor in anatomy at the University of Michigan Medical School, and assistant, associate, and full professor of zoology at the University of California at Berkeley.

JAMES D. POETTCKER, MD, Plaquemine, La, and KEVIN H. REED, MD, Nevis, Minn, who were graduated from The University of Texas Medical Branch at Galveston in May, were selected recipients of the Outstanding Three Year Graduate Award and the Gold Headed Cane award, respectively, for epitomizing the ultimate in patient care. Dr Poettcker plans a surgery internship in San Antonio following graduation. Dr Reed also received the Jimmy Doyle Dickens Award for outstanding scholastic achievement in anatomy his freshman year.

WILLIAM T. BUTLER, MD, has been named Executive Vice President and Dean, and JOSEPH M. MERRILL, MD, has been named Executive Vice President for Planning and Development at Baylor College of Medicine. As Executive Vice President and Dean, Dr Butler, who has served as Acting Executive Vice President during the past year, will assume responsibility for academic, faculty, scientific and institutional affairs. Dr Merrill, who is returning from a one-year sabbatical during which he studied the role of the health science center in health care delivery systems, will be responsible for immediate and long-range planning, and the identification of funding needs to provide for the continued support and growth of the program areas of the College of Medicine.

WILLIAM P. DEISS JR, MD, professor and chairman of internal medicine at The University of Texas Medical Branch, has been named to the American Board of Internal Medicine. Dr Deiss, who will serve on the board for three years, was nominated by members of the American College of Physicians, the section council on internal medicine of the American Medical Association, the American Society of Internal Medicine, and the Association of Professors of Medicine.

Texas Tech University School of Medicine developmental anatomist ROGER R. MARKWALD, PhD, has been named recipient of the second LBJ Research Award of the Texas Affiliate of the American Heart Association. The award is presented annually in recognition of the most "outstanding research project in Texas toward the eradication of cardiovascular disease." Dr Markwald is studying early development of heart connective tissue under a grant from the American Heart Association.

Roger R. Markwald, PhD, right, associate professor of anatomy at Texas Tech University School of Medicine, Lubbock, accepts the Lyndon B. Johnson Research Award from Joseph C. Ogle, MD, president of the American Heart Association Texas Affiliate, Inc.

Medical students, graduate students, and house staff received special awards during the annual Honors and Awards Convocation of The University of Texas Medical Branch in Galveston in May. The Herrmann Award, presented to the senior medical student who excels in medicine, was presented to MARY PAGEL, Galveston. The Lubben Award, presented to aid a worthy student in the study of urology, was awarded to MICHAEL GRUBER, Dallas, and LARRY J. LANDERY, Houston, both senior medical students. The Jimmy Doyle Dickens Memorial Award, given to the outstanding student in anatomy, was presented to MARY LOU APPLEBAUM, freshman medical student from Galveston. This year's recipient of the J.C.B. Grant Anatomy Scholarship, presented for outstanding academic attainment and interest in anatomy, was to JUDY LEE JONES, third year medical student from Nacogdoches. JAMES W. MASON, MD, Waco, received the W. N. Nicholson Scholarship Award, presented to a medical student who has completed his third year of study and is planning a career in family practice. GREGORY J. O'SHANICK, Tallmadge, Ohio, was presented the Hamilton Ford Award, given to a senior student in recognition of outstanding achievement in psychiatry in medicine. The Upjohn Medical Achievement Award, presented in recognition of service to the Medical Branch and the American Medical Student Association and for scholastic achievement, was given to RICHARD K. HURLEY, Humble, senior medical student.

JOE W. KING, MD, director of child and adolescent services at Timberlawn Psychiatric Hospital, Inc, Dallas, has been installed as president of the American Society for Adolescent Psychiatry. Dr King is also involved in work at Baylor Hospital, Children's Medical Center, Shadybrook, the Dallas County Day Care Program for Delinquent Girls, and the Meridell Achievement Center in Austin. He is a Fellow of the American Psychiatric Association.

RALPH D. FEIGIN, MD, professor of pediatrics and director of the division of pediatric infectious diseases at Washington University School of Medicine in St Louis, has been appointed the J. S. Abercrombie Professor and Chairman of Pediatrics at Baylor College of Medicine and Physician-in-Chief at Texas Children's Hospital. Dr Feigin succeeds RUSSELL J. BLATTNER, MD, who is retiring from the dual posts after 30 years of service.

J. TED HARTMAN, MD, professor and chairperson of Orthopaedic Surgery at Texas Tech University School of Medicine, has been elected to the American Board of Orthopaedic Surgery. Dr Hartman's appointment to the board will become effective in September 1978. Dr Hartman is a member of the American Orthopaedic Association, the Association of Bone and Joint Surgeons, the American Academy of Orthopaedic Surgeons, the Clinical Orthopaedic Society, and the Western Orthopaedic Association.

"Well, you may have been the worst case of it in New York but now you are in Texas and you will have to settle for being the sixth worst case in the state."

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

TEXAS REPRESENTATIVES

A. F. Ennis, Jr. and B. C. Crim, Suite 210, 712 N. Washington, Dallas 75246	Telephone (214) 821-4640
W. L. Kirk, 1508 Hermann Prof. Bldg., Houston 77030	Telephone (713) 797-9835
M. C. Rollans, 408 GPM Bldg., South Tower, San Antonio 78216	Telephone (512) 344-5901

KELSEY-SEYBOLD CLINIC

TEXAS MEDICAL CENTER ● 6624 FANNIN STREET ● HOUSTON, TEXAS 77030 ● AC (713) 797-1551

INTERNAL MEDICINE

Allergy
C. W. Ewing, M.D., F.A.C.A.
S. Weakley, M.D.

Arthritis and Rheumatic Diseases
J. W. Kemper, M.D., F.A.C.P.
M. S. Fischer, M.D.

Cardiology
E. F. Beard, M.D., F.A.C.P.
D. D. Goulden, M.D.
M. J. Mihalick, M.D.

Endocrine and Metabolic Diseases
M. P. Kelsey, M.D., F.A.C.P.
A. E. Leiser, M.D., F.A.C.P.
P. K. Champion, Jr., M.D., F.A.C.P.

Gastrointestinal Diseases, Endoscopy
J. R. Kelsey, Jr., M.D., F.A.C.P.
P. S. Bentlif, M.D., F.A.C.P.
R. D. Eichhorn, M.D., F.A.C.P.
F. S. O'Neil, M.D., F.A.C.P.
J. W. McBee, M.D., F.A.C.P.

General Internal Medicine
G. E. Burke, M.D.
C. F. Taboada, M.D., F.A.C.P.
N. H. Nauert, Jr., M.D.
G. G. Bourianoff, M.D.
G. Crofoot, M.D.

Hematology
J. B. Bart, M.D., F.A.C.P.

Infectious Diseases
S. Riggs, M.D., F.A.C.P.

Nuclear Medicine
D. E. Mouton, M.D., F.A.C.N.M.

Oncology
E. N. Root, M.D.

Pulmonary Diseases, Bronchoscopy
S. P. Fischer, M.D., F.A.C.P.
B. D. Walker, M.D.

DERMATOLOGY

W. M. Fraser, M.D., F.A.A.D.
D. W. Owens, M.D., F.A.A.D.

GENERAL & THORACIC SURGERY

Surgical Endoscopy & Colonoscopy
W. D. Seybold, M.D., F.A.C.S.
J. D. McMurrey, M.D., F.A.C.S.
J. L. Doggett, M.D., F.A.C.S.
M. F. Appel, M.D., F.A.C.S.

OBSTETRICS & GYNECOLOGY

M. L. Cody, M.D., F.A.C.S., F.A.C.O.G.
W. A. Johnson III, M.D., F.A.C.O.G.
A. G. Guette, M.D.

OCCUPATIONAL & PREVENTIVE MEDICINE

M. B. Johnston, M.D., F.A.C.Pr.M.
W. B. Dye, M.D., F.A.C.Pr.M.
H. B. Elwell, Jr., M.D.
R. M. Fenno, M.D., F.A.C.P.
F. A. Goss, M.D.
W. R. Hawkins, M.D., F.A.C.Pr.M.
W. R. Hein, M.D., F.A.C.Pr.M.
L. A. Herrmann, M.D.
G. F. Kelly, M.D., F.A.C.Pr.M.
C. A. Owen, M.D., F.A.C.S.
B. W. Prior, M.D., F.A.C.Pr.M.
N. A. Tadros, M.D., F.A.C.Pr.M.
A. M. Wyss, M.D., F.A.C.Pr.M.
R. J. Huebner, M.D.
T. K. Lee, M.D., M.P.H.

OPHTHALMOLOGY

H. E. Wahlen, M.D., D.A.B.O.
J. E. Key, II, M.D., D.A.B.O.

ORTHOPEDIC SURGERY

R. A. Fulford, M.D., F.R.C.S. (C)
T. H. Crouch, M.D., F.A.C.S.

OTOLARYNGOLOGY

J. C. Dickson, M.D., F.A.C.S.
J. L. Smith, M.D., F.A.C.S.
L. P. Conrad, M.D.

PATHOLOGY

R. A. Jordan, M.D., F.A.S.C.P.

PEDIATRICS

Rheumatology
E. J. Brewer, Jr., M.D., F.A.A.P.

Allergy and Pulmonary Diseases
C. W. Ewing, M.D., F.A.A.P.

Gastroenterology
G. D. Ferry, M.D., F.A.A.P.

General Pediatrics and Consultation
F. J. Boland, M.D., F.A.A.P.
R. M. Thaler, M.D., F.A.A.P.
K. C. Pinckard, M.D.

PSYCHIATRY

C. G. Cochran, M.D.
R. Daichman, M.D.

RADIOLOGY

R. J. Kurth, M.D., F.A.C.R.
E. G. Linares, M.D.
P. Raphael, M.D.
T. P. Connolly, M.D.

UROLOGY

D. W. Pranke, M.D., F.A.C.S.
F. M. Fry, M.D.

DENTISTRY

J. W. Orr, D.D.S.
D. L. McClung, D.D.S.

SPEECH PATHOLOGY & AUDIOLOGY

D. R. Fox, Ph.D.
J. W. Porter, M.A.
N. Shulak, M.A.

EXECUTIVE DIRECTOR

J. A. Bakken, F.A.C.M.G.A.

K-S WEST

1111 Augusta Drive
Houston, Texas 77057
(713) 780-1661

K-S DOWNTOWN

Two Houston Center, Suite P-310
909 Fannin Street, Houston, Texas
77002 (713) 654-4401

Medicine in literature

EDITOR'S NOTE: This month's bibliography updates the bibliography which was published in the November 1976 issue of TEXAS MEDICINE, "Computerized Axial Tomography." Both were prepared by the staff of TMA's Memorial Library. These and other publications pertaining to computerized axial tomography are available from the Memorial Library.

COMPUTERIZED AXIAL TOMOGRAPHY

Alderson PO, Mikhael M, Coleman RE, et al: Optimal utilization of computerized cranial tomography and radionuclide brain imaging. *Neurology* 26(9):803-807, 1976.

American Hospital Association: *CT Scanners; A Technical Report*. Chicago, AHA, 1977. WN 150 A512c 1977

Bachman DS, Hodges FJ III, Freeman JM: Computerized axial tomography in chronic seizure disorders of children. *Pediatrics* 58:828-832, 1976.

Computerised tomography with the General Purpose Scanner (EMI). (240 slides) Amsterdam, Excerpta Medica, 1977. SL 7

Cooperman AM, Haaga J, Alfidi R, et al: Computed tomography: a valuable aid to the abdominal surgeon. *Am J Surg* 133: 121-126, January 1977.

Creditor MC, Garrett JB: The information base for diffusion of technology: computed tomography scanning. *N Engl J Med* 297 (1):49-52, 1977.

Davis KR, Taveras JM, Roberson GH, et al: Computed tomography in head trauma. *Semin Roentgenol* 12(1):53-62, 1977.

Davis KR, Ackerman RH, Kistler JP, et al: Computed tomography of cerebral infarction: hemorrhagic, contrast enhancement, and time of appearance. *Comput Tomog* 1:71-86, 1977.

Davis KR, Taveras JM, Roberson GH: Some limitations of computed tomography in the diagnosis of neurological diseases. *Am J Roentgenol* 127:111-123, 1976.

Downey GW: A scanner for every hospital? *Mod Health Care* 5(2):16s-16x, 1976.

Haaga JR, Alfidi RJ, Zelch MG, et al: Computed tomography of the pancreas. *Radiology* 120(3):589-595, 1976.

Hammerschlag SB, Wolpert SM, Carter BL: Computed tomography of the spinal canal. *Radiology* 121(2):361-367, 1976.

Harwood-Nash DC: Congenital craniocerebral abnormalities and computed tomography. *Semin Roentgenol* 12(1):39-51, 1977.

Hilal SK, Trokel SL: Computerized tomography of the orbit using thin sections. *Semin Roentgenol* 12(2):137-147, 1977.

Hodes BL, Weinberg P: A combined approach for the diagnosis of orbital disease. Computed tomography and standardized A-scan echography. *Arch Ophthalmol* 95(5):781-788, 1977.

Institute of Medicine: *A Policy Statement: Computed Tomographic Scanning*. Washington, DC, National Academy of Sciences, 1977. WN 160 I59p 1977

Jacobs L, Kinkel WR, Heffner RR Jr: Autopsy correlations of computerized tomography: experience with 6,000 CT scans. *Neurology* 26(12):1111-1118, 1976.

Kinkel WR, Jacobs L: Computerized axial transverse tomography in cerebrovascular disease. *Neurology* 26(10):924-930, 1976.

Kuehnle J, Mendelson JH, Davis KR, et al: Computed tomographic examination of

heavy marijuana smokers. *JAMA* 237 (12):1231-1232, 1977.

Lukin RR, Chambers AA, Tomsick TA: Cerebral vascular lesions: infarction, hemorrhage, aneurysm, and arteriovenous malformations. *Semin Roentgenol* 12(1): 77-89, 1977.

McDavid WD, Waggener RG, Dennis MJ, et al: Estimation of chemical composition and density from computed tomography carried out at a number of energies. *Invest Radiol* 12(2):189-194, 1977.

New PF, Aronow S: Attenuation measurements of whole blood and blood fractions in computed tomography. *Radiology* 121 (3 pt 1):635-640, 1976.

New PF, Davis KR, Ballantine HT Jr: Computed tomography in cerebral abscess. *Radiology* 121(3 pt 1):641-646, 1976.

New PFJ: Computed tomography in the diagnosis of hemorrhagic stroke. *Adv Neurol* 16:145-168, 1977.

Pay NT, Carella RJ, Lin JP, et al: The usefulness of computed tomography during and after radiation therapy in patients with brain tumors. *Radiology* 121(1):79-83, 1976.

Pinto RS, Becker MH: Computed tomography in pediatric diagnosis. *Am J Dis Child* 131:583-592, 1977.

Rosenfield AT, Curtis AM, Putnam CE, et al: Gray scale ultrasonography, computerized tomography, and nephrotomography in evaluation of polycystic kidney and liver disease. *Urology* 9(4):436-438, 1977.

Walshe TM, Hier DB, Davis KR: The diagnosis of hypertensive intracerebral hemorrhage: the contribution of computed tomography. *Comput Tomog* 1:63-69, 1977.

IN THE TMA LIBRARY

Artz CP, Hardy JD (eds): *Management of Surgical Complications,* ed 3. Philadelphia, WB Saunders Co, 1975.

Bedford MA: *Color Atlas of Ophthalmological Diagnosis.* Chicago, Year Book Medical Publishers, Inc, 1971.

Braverman IM: *Skin Signs of Systemic Disease.* Philadelphia, WB Saunders Co, 1970.

College of American Pathologists: *Guidelines for Pathologists, Professional Practices.* 1977.

Egdahl RH, Gertman PM (eds): *Quality Health Care, The Role of Continuing Medical Education.* Germantown, Md, Aspen Systems Corp, 1977.

Gifford GE Jr (ed): *Physician Signers of the Declaration of Independence.* New York, Science History Publications, 1976.

Institute of Medicine: *A Policy Statement, Computed Tomographic Scanning, April 1977.* Washington, DC, National Academy of Sciences, 1977.

Maquet PGJ: *Biomechanics of the Knee, With Application to the Pathogenesis and the Surgical Treatment of Osteoarthritis.* Berlin, Springer-Verlag, 1976.

Moghissi KS, Evans TN (eds): *Nutritional Impacts on Women Throughout Life with Emphasis on Reproduction.* Hagerstown, Md, Harper & Row, 1977.

Nichols JD, Presley J: *"Please, Doctor, Do Something," A Modern Physician Looks at Health and Nutrition.* Old Greenwich, Conn, Devin-Adair Co, 1972.

Phillips I, Meers PD, D'Arcy PF (eds): *Microbiological Hazards of Infusion Therapy.*

Littleton, Mass, Publishing Sciences Group, Inc, 1976.

Sanders RC, James AE Jr (eds): *Ultrasonography in Obstetrics and Gynecology*. New York, Appleton-Century-Crofts, 1977.

Rusk HA: *Rehabilitation Medicine*, ed 4. St Louis, CV Mosby Co, 1977.

Searle CE (ed): *Chemical Carcinogens*. Washington, DC, American Chemical Society, 1976.

Smith SW: *Diagnostic Ultrasound: A Review of Clinical Applications and the State of the Art of Commercial and Experimental Systems*. Rockville, Md, US Department of Health, Education, and Welfare, Public Health Service, Food and Drug Administration, Bureau of Radiological Health, 1976.

The Role of Medical Advisory Boards in Driver Licensing. Washington, DC, US Department of Transportation, National Highway Traffic Safety Administration, Traffic Safety Programs, 1977.

Wisdom A: *Color Atlas of Venereology*. Chicago, Year Book Medical Publishers, Inc, 1973.

Wolfe JN: *Xeroradiography of the Breast*. Springfield, Ill, Charles C Thomas, 1972.

"Whoever made up the saying 'slept like a baby'?"

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

N.L. BARKER, JR
Paris, 1918-1977

J.E. BELL
Houston, 1894-1976

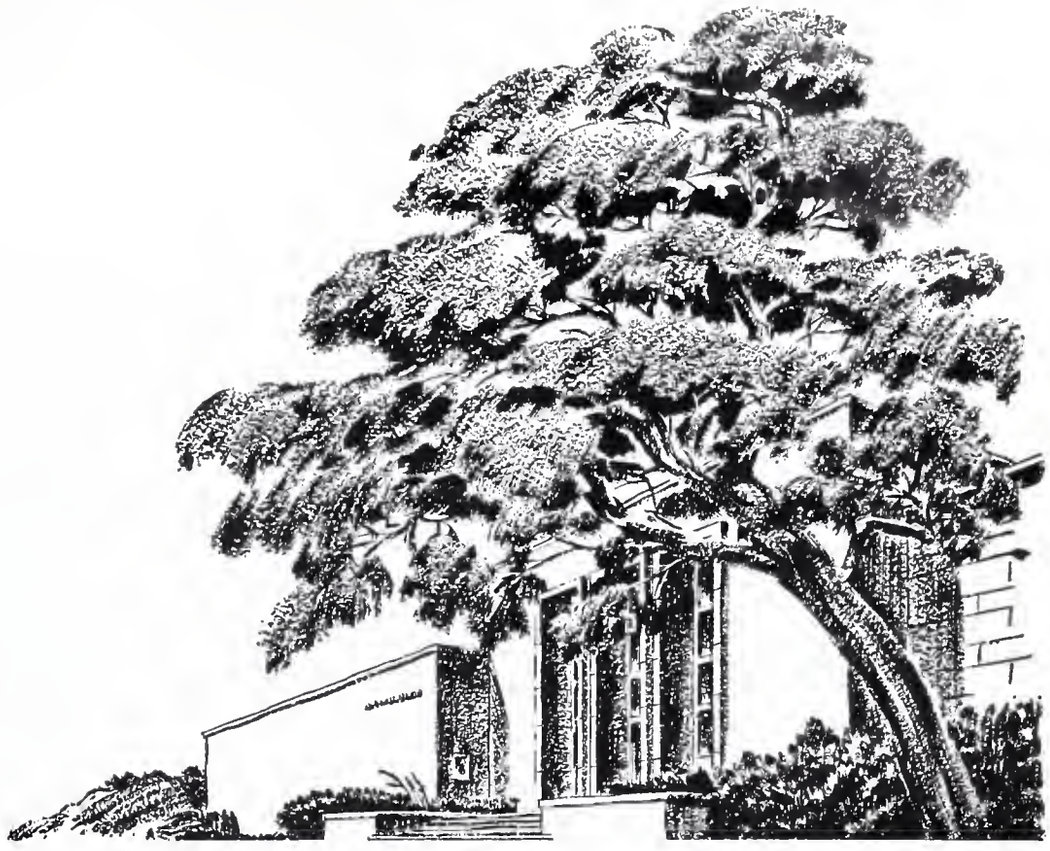
E.T. COATES
San Antonio, 1909-1977

J.B. DesROCHERS
San Antonio, 1906-1976

E.F. MATHIS
San Antonio, 1924-1976

B.R. SPILLAR, JR
San Antonio, 1930-1977

W.H. STOVER
Marfa, 1920-1976



IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

TEXAS MEDICAL MEMORIAL LIBRARY FUND
1801 N. Lamar Blvd., Austin, Texas 78701

I enclose the amount of $_____. Given in Memory of _____

Please send remembrance card to:

Name _____

Address _____

City and State _____

Donor Information:

Name _____

Address _____

City and State _____

Deaths

Dr Barker

Dr Bell

Nym L. Barker, Jr, MD

Nym Lou Barker, Jr, MD, President of Texas Medical Association during 1975-1976, died May 15, 1977 in Houston. He was 58 years of age.

Dr Barker, a general practitioner from Paris, Tex, participated in many Texas Medical Association activities. He was a member of the Executive Board, the Board of Trustees, and the TMA delegation to the American Medical Association House of Delegates. He was past vice-chairman of the delegation.

His other professional memberships included Lamar-Delta County Medical Society (past president), Southern Medical Association, American Society of Abdominal Surgeons, and the American Academy of Family Physicians (charter fellow). Dr Barker also was formerly on the staff of St Joseph's Hospital, Paris, and had served as president of the staff. He had been a member of the Texas State Board of Health Resources for 12 years.

The physician was active in civic as well as medical affairs. He was past president of the Paris Noon Lions Club; of the Lamar County Chamber of Commerce; and of the United Service Clubs. He was a past director of the East Texas Chamber of Commerce and a member of the Board of Directors of the Paris Knife and Fork Club. He also had devoted much time to Boy Scouts work.

Dr Barker was born in Alexandria, La, and spent his youth in Broken Bow, Okla. He received a BA degree from Hendrix College, Conway, Ark, in 1940. He completed his BS and MD degrees at the University of Arkansas School of Medicine, Little Rock, in 1944. Following graduation from medical school, Dr Barker held an internship at Santa Rosa Hospital, San Antonio. His residency work was at Santa Rosa Hospital and Robert B. Green Hospital, also in San Antonio. From 1946 to 1948, he served with the US Army Medical Corps. He practiced in Paris from 1948 until 1976, when illness forced him to close his office.

Surviving Dr Barker are his wife, Betty Nicholson Breit Barker, Paris; sons, Nym L. Barker III, Houston; Bill Barker, Austin; and Bob Breit, Fayetteville, Ark; daughters, Mrs Ernest Duckworth, Richmond, Va; Mrs Robert Stovall, Oklahoma City; Mrs Lee Maris, Little Rock, Ark; and Mrs Larry Jech, Harrison, Ark; mother, Maude Lee Barker, Broken Bow, Okla; sister, Mrs Jim Ogle, Alexandria, Va; and brother, C. D. Barker, MD, Paris.

J. E. Bell, MD

Dr Justin Edward Bell, Houston, died Nov 23, 1976. He was 83 years of age.

Dr Bell practiced in Houston from 1943 until his retirement in 1971. Prior to moving to Houston, he had practiced in Alexandria, La; Sourlake, Tex; and Liberty, Tex. He was in practice for a total of 48 years.

A native of Simsboro, La, Dr Bell was graduated from Baylor University, Waco, in 1915 with a Bachelor of Arts degree. In 1922, he received his MD degree from Tulane University School of Medicine, New Orleans. He remained in New Orleans from 1922 through 1923 to be an intern at Charity Hospital.

Dr Bell's professional memberships included the American Medical Association, Harris County Medical Society, American Academy of Family Physicians, and 50-year Club of American Medicine. He also was a member of the River Oaks Rotary Club and the Arabia Shrine Temple.

Surviving Dr Bell are his wife, Agnes Lahat Bell, Houston; daughter, Monica D. Bell, Washington, DC; and two nieces.

E.T. Coates, MD

Elmer Theodore Coates, MD, a San Antonio obstetrician-gynecologist, died Jan 17, 1977.

Dr Coates, 68, had practiced in San Antonio since 1937. He was a native of Ohiowa, Neb. In 1933, Dr Coates completed his MD degree at the University of Nebraska, Lincoln. He was an intern at St Margaret Memorial Hospital, Pittsburgh, and at Long Island College Hospital, Brooklyn, NY. He was an assistant resident at the Obstetrical Maternity Hospital, Western Reserve University, Cleveland, and a resident at Cleveland City Hospital.

Dr Coates' professional memberships included the American Medical Association, Bexar County Medical Society, and Texas Association of Obstetricians and Gynecologists.

Surviving the physician are his wife, Barbara C. Coates; daughters, Mrs Gerald Dalrymple and Barbara Anne Coates; son, John W. Coates, and three grandchildren, all of San Antonio.

E.F. Mathis, MD

Dr Edwin Forrest Mathis, a San Antonio psychiatrist, died Nov 1, 1976.

Dr Mathis, 53, had practiced in San Antonio since 1972. He was a native of Montgomery City, Mo, and spent his youth in Arkansas. He completed his pre-medical education at Arkansas State University in 1949 and was graduated from the University of Arkansas School of Medicine in 1953. Following his graduation from medical school, Dr Mathis was an intern at University Hospital, Little Rock, Ark (1953-1954). He held pediatrics residencies at University Hospital and the University of Louisville.

Dr Mathis practiced in Little Rock from 1956 to 1968. During 1968-1972, he was involved in postgraduate studies at the Menninger School of Psychiatry and the Menninger Foundation, Topeka, Kan.

The doctor's professional memberships included the American Academy of Pediatrics, American Psychiatric Association, American Medical Association, and Bexar County Medical Society. He also had been a member of the Arkansas Association for Children with Learning Disabilities and Phi Beta Pi medical fraternity.

Surviving Dr Mathis are his wife, Patrice Mathis, San Antonio; daughters, Pam Peterson, Fort Scott, Kan, and Miriam Mathis, San Antonio; and sons, Mark Mathis, Todd Mathis, and Grant Mathis, all of San Antonio.

Dr Coates

Dr Mathis

J.B. DesRochers, MD

Jean B. DesRochers, MD, a San Antonio psychiatrist, died Dec 16, 1976, at the age of 70.

Dr DesRochers was a native of Chicopee, Mass. He received his medical education at the University of Montreal, Faculty of Medicine, graduating in 1935. His internship was at the University Hospitals, Montreal (1934-1935), and his residency was at Meriden (Conn) Hospital (1935-1936). He also did postgraduate work at the US Veterans Hospital, St Cloud, Minn, (1937-1941) and the University of Pennsylvania Graduate School of Medicine (1953-1954).

Before moving to San Antonio in 1954, Dr DesRochers had practiced in Kerrville, Tex, and South Belmar, NJ.

The physician's professional memberships included the American Psychiatric Association, Bexar County Medical Society, and American Medical Association. He had been an inactive member of Texas Medical Association since 1973.

He also was a member of the Knights of Columbus and the Catholic Physicians Guild.

Surviving Dr DesRochers are his wife, Al-

Dr Stover

ma Terrahe DesRochers, San Antonio; daughter, Mary DesRochers Broderick, Dallas; sons, John A. DesRochers, Brownsville, Tex, and Joe Terrahe DesRochers, Washington, DC; brothers, Wilfred DesRochers, Deerfield Beach, Fla, and Dr E.C. DesRochers, Chicopee, Mass; and two grandchildren.

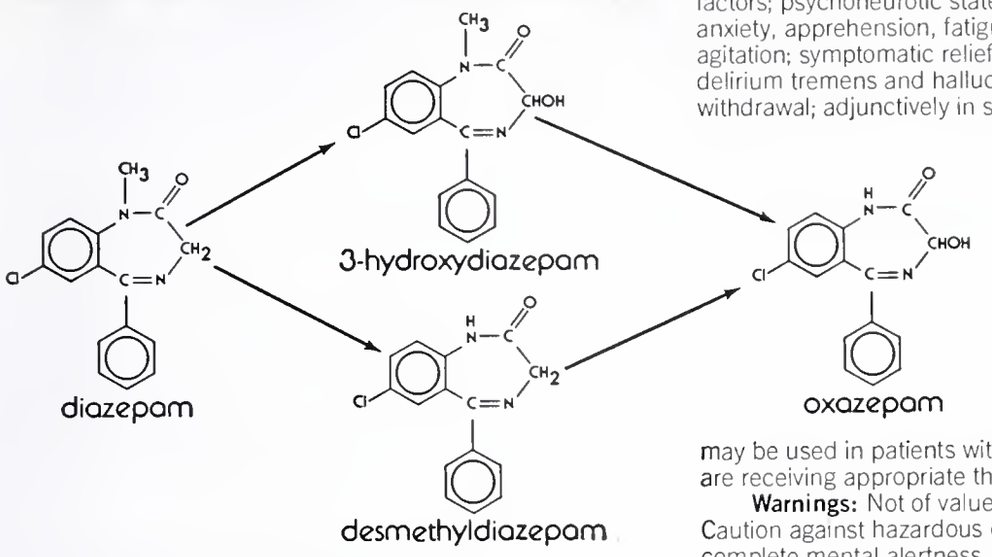
B.R. Spillar, Jr, MD

Bliss Robison Spillar, Jr, MD, 46, San Antonio, died Feb 7, 1977.
Dr Spillar had practiced in San Antonio since 1963. He was the immediate past chief of staff of Southwest Texas Methodist Hospital.
The physician was born in Austin, Tex. He received his BA degree from The University of Texas there in 1950. In 1954, he was graduated from Baylor College of Medicine. Both his internship and residency were at Hermann Hospital, Houston. From 1959 until 1963, Dr Spillar was a staff anesthesiologist at Scott and White Clinic, Temple.
Dr Spillar's professional memberships included Bexar County Medical Society, the American Medical Association, Texas Society of Anesthesiologists, American Society of Anesthesiologists, International Anesthesia Research Society, Southern Medical Association, and the American College of Anesthesia.
He also was a member of Trinity United Methodist Church, Phi Chi medical fraternity, and Lambda Chi Alpha social fraternity. He was active in numerous local civic organizations, including the Boy Scouts.
Surviving Dr Spillar are his wife, Edna M. Hughes Spillar, MD; daughters, Rebecca Spillar and Katherine Spillar Schwarz; sons, Bliss R. Spillar III and Robert Spillar, all of San Antonio; his parents, Mr and Mrs Bliss R. Spillar, Sr, Manchaca, Tex, and one sister.

W.H. Stover, MD

Walter Huber Stover, MD, a Marfa family practitioner, died Dec 29, 1976.
Dr Stover, 56, was a native of Versailles, Ohio, where he obtained his preliminary education. He attended Miami University, Oxford, Ohio, for three years before entering the University of Cincinnati College of Medicine. He completed his MD degree in 1946. His internship was at Cincinnati General Hospital during 1946-1947. He opened his Marfa practice in 1948.
Dr Stover was a member of the Big Bend (Pecos-Jeff Davis-Presidio-Brewster-Terrell) County Medical Society, American Medical Association, Texas Academy of Family Physicians, and American Academy of Family Physicians.
Surviving Dr Stover are his wife, Jane Martin Stover, Marfa; daughters, Nancy S. Armstrong, MD, Dallas; Kathy Donnell, Batesville, Tex; and Shirley Stover, Austin, Tex; son, Charles Stover, Odessa, Tex; mother, Mrs C.W. Stover, Versailles, Ohio; sisters, Mrs R.R. Coffield and Mrs Cletus Reck, both of Versailles, Ohio, and two grandchildren.

A pharmacokinetic character all its own



Valium (diazepam) is a benzodiazepine with a distinctive pharmacokinetic profile

The pharmacokinetic profile of Valium is one of the characteristics that sets it apart from other benzodiazepines. Consider, in particular, the metabolic pathway of Valium. The three major metabolites of Valium exhibit significant pharmacologic activity—and so, of course, does the parent substance—diazepam itself. All combine to produce the characteristic clinical response seen with Valium. The response you have come to know, to want and to trust.

Pharmacokinetic studies also demonstrate that Valium has a pattern of absorption, distribution, metabolism and elimination that is reliable and consistent. And, although the pharmacokinetics of a drug cannot, at present, be specifically related to its clinical effects, it is clearly a factor that distinguishes one product from another by providing important insights into how each moves through the patient's body.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY

INPATIENT-OUTPATIENT

DEPARTMENT OF ADOLESCENT PSYCHIATRY

A Private 82 bed psychiatric hospital located in Oak Cliff on 18 acres amidst natural wooded surroundings. A multi-approach treatment center of neurologic and all psychiatric disorders. Treatment modalities include Somatic Therapy, Milieu Therapy, Chemotherapy, Individual and Group Therapy and Behavior Modification. Complete facilities for OT-RT under the direction of trained personnel. An individually directed program based on full diagnostic evaluation and actual performance administered by a staff skilled in special education and problems of the adolescent and young adult.

PSYCHIATRY

Jackson H. Speegle, M.D.
Fred H. Jordan, M.D.
Joseph H. Lindsay, M.D.
John T. Holbrook, M.D.

PSYCHOLOGY

George R. Mount, Ph.D.
Tom I. Payton, M.S.
Patrick R. Barnes, M.S.

DIRECTOR OF NURSES
Nita Ivey, R.N.

SOCIAL SERVICES
Beth Rutherford, M.S.W.

COURTESY STAFF

DIRECTOR OF EDUCATION
William E. Nix, Ph.D.

O.T. AND R.T. THERAPY
Director
Chequita Dian Badger, B.S.

1353 N. WESTMORELAND AVENUE, DALLAS, TEXAS 75211 **214 331-8331**

Starlite Village Hospital

Center Point, Texas

Ph.: 634-2212
634-2213

- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

R. H. McBride
Administrator

CHAMPUS APPROVED
JCAH: ACCREDITED

PARK NORTH GENERAL HOSPITAL

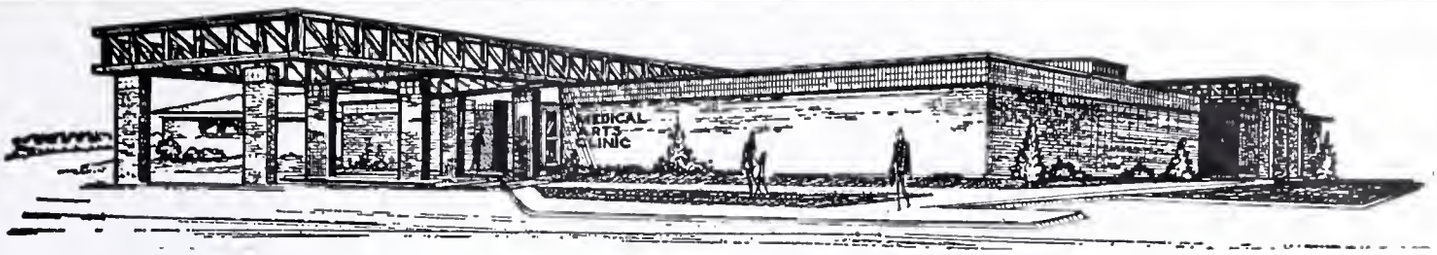
4330 Vance Jackson
San Antonio, Texas 78230
512/341/5131

A private 100-bed patient-oriented hospital offering general medical/surgical as well as comprehensive mental health services. Serving San Antonio and other Texas communities with dedicated professionalism.

A Blue Cross/Medicare/Medicaid approved hospital

For more information contact:

Manuel L. English, Ph.D.
Administrator



MEDICAL ARTS CLINIC ASSOCIATION of corsicana

ANESTHESIOLOGY
LARRY R. STEVENER, M.D., F.A.C.A.

DERMATOLOGY & SYPHILOLOGY
JOSEPH M. GLICKSMAN, M.D., F.A.A.D.*
J. D. SMITH, M.D., F.A.A.D.*

FAMILY PRACTICE
ENNIS, TEXAS
W. B. KINZIE, MD., D.A.B.F.P.

GENERAL & VASCULAR SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S*
E. SCOTT MIDDLETON, M.D., F.A.C.S.*

GENERAL, VASCULAR & THORACIC SURGERY
ROSS B. REAGAN, M.D.*

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
ALLEN M. JONES, M.D.*
JOHN D. NELSON, M.D.*
L. BRYAN COTTON, JR., M.D.*
KENT ROGERS, M.D.*
JACK B. BANKHEAD, M.D.

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
W. GENE MURFF, M.D., F.A.C.O.G.*
NEAL GREEN, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D., F.A.A.O.O.*

ORTHOPAEDIC SURGERY
WALLACE E. LOWRY, JR., M.D.*
JAMES A. DOTSON, M.D.*

PATHOLOGY
MARY G. BANKHEAD, M.D.*

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D., F.A.A.P.*
MASON P. GILFOIL, M.D.

UROLOGY
WILLIAM V. HALL, M.D., D.A.B.U., F.A.C.S.*

EXECUTIVE DIRECTOR
DON L. BOWEN, M.G.M.A.

***DIPLOMATE OF THE AMERICAN BOARD**

TRAVIS CLINIC FOUNDATION AND TRAVIS CLINIC ASSOCIATION

JACKSONVILLE, TEXAS 75766

STAFF

General Surgery:
L. L. Travis, M.D., Emeritus
Ken E. Kuykendall, M.D.
E. O. Bonsukan, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.
Spencer Kent, M.D.

Pathology:
Harbert Davenport, Jr., M.D.
Jimmy B. Harkins, M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
Mary A. Bone, M.D.
J. A. Armstrong, M.D.
D. B. Turner, M.D.
K. A. Majmundar, M.D.
B. Ruyani, M.D.
Wm. N. Meshel, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Dermatology:
T. S. Arrington, M.D.

Pediatrics:
M. L. Gray, M.D.
G. Majmundar, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

Podiatry:
Daniel H. Phelps, D.P.M.

Psychology:
Charles T. Fries, Ed.D.

Business Manager:
Gerald L. Burks

We have your best interest at heart.

Give Heart Fund
American Heart Association

Arlington Neuropsychiatric Center

A PRIVATE PSYCHIATRIC HOSPITAL ADULT UNIT ADOLESCENT UNIT

COMPLETE ACCREDITED FACILITIES, SERVICES AND PROGRAMS, INCLUDING SCHOOL, FOR THE CARE AND TREATMENT OF BOTH ADULT AND ADOLESCENT PATIENTS.

PSYCHIATRY
RICHARD J. CANCEMI, M.D.
ARMANDO DESALOMS, M.D.
ROBERT C. KNIPSTEIN, M.D.
SUE L. NICKEY, M.D.
CARL E. RENFRO, M.D.
MURRAY C. SKAGGS, M.D.
THOMAS C. TIPS, M.D.

PSYCHOLOGY
ANN TUCKER, Ph.D.

SOCIAL WORK
WILLIAM PORTWOOD, MSW

ACTIVITIES THERAPY
GAIL LANE, OTR

ADMINISTRATOR
JAMES H. BINGHAM, JR.

BLUE CROSS AND CHAMPUS APPROVED **MEDICARE CERTIFIED**

701 WEST RANDOL MILL ROAD, ARLINGTON, TEXAS 76012

ADMISSIONS ACCEPTED ON 24-HOUR BASIS (817) 261-3121

Cliff Hostetler, D.D.S.

MANAGE YOUR OWN RETIREMENT FUND — SUCCESSFULLY!!!

Saturday, October 8, 1977 **Houston Oaks Hotel**

8:30 - 5:00 (One Day Only)

THE COURSE: A step-by-step program for self-employed professionals for Keogh, Corporate or IRA Plans. A proven program used by the lecturer for over seven years. Annual rate of increase . . . 9½% . . . including 1973, 1974 and 1975! Specific recommendations re: "tax shelters", insurance, investments outside retirement funds, stock market evaluation, mutual funds and real estate. Note: specific recommendations for those over 50.

THE INSTRUCTOR: Dr. Cliff Hostetler has a degree in Economics and Business Administration and graduated with Honors from the University of Washington Dental School in 1960. He is past President of the Orange County Dental Society and is currently in general practice in Santa Ana, California. Dr. Hostetler has successfully presented this program at the University of Southern California, University of California, San Francisco and University of Oregon Dental Schools, as well as medical and dental societies throughout the country.

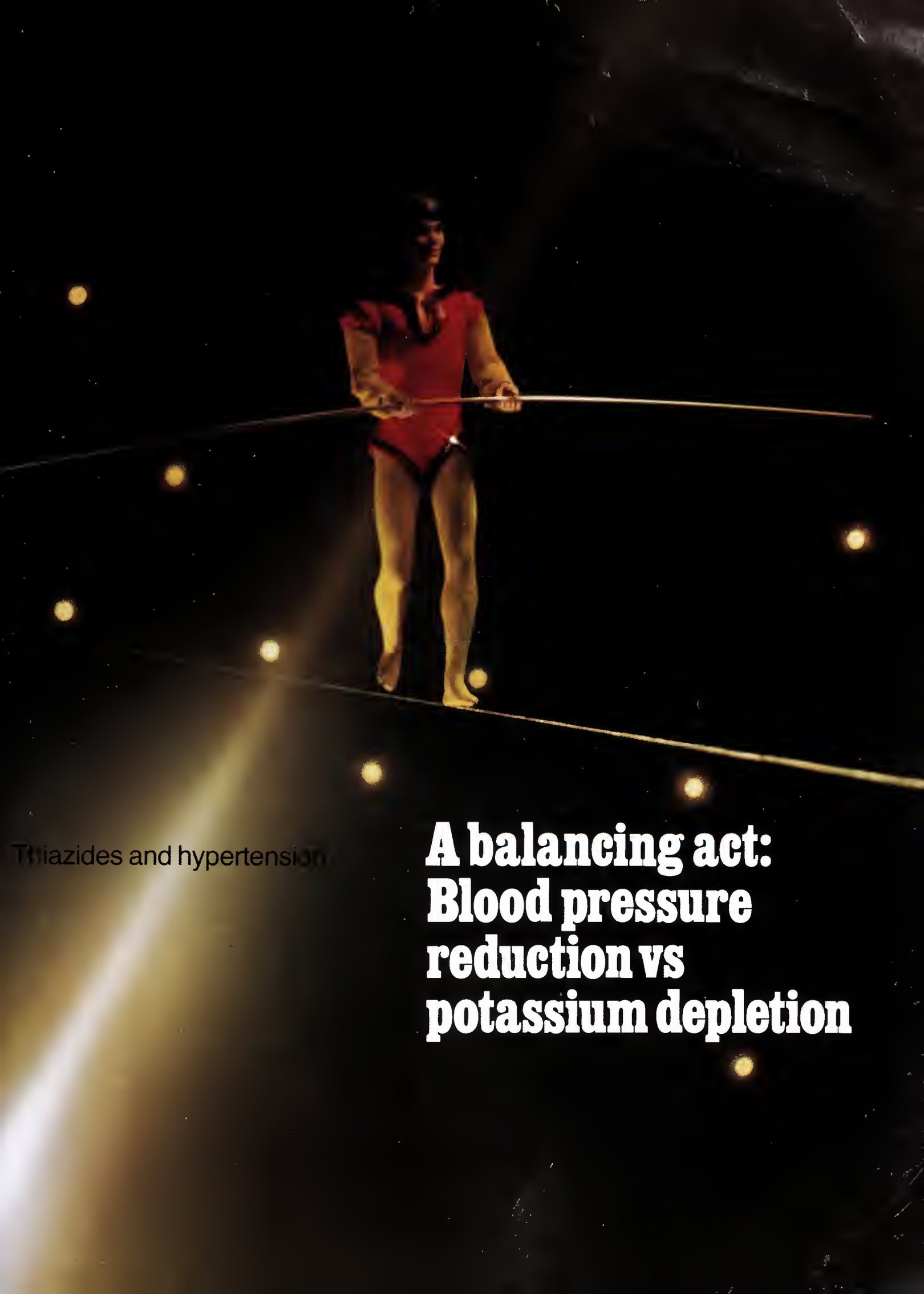
I wish to apply for "Manage Your Own Retirement Fund — Successfully" on October 8, 1977 in Houston.

Name_____

Address_____
Street City State Zip

I enclose course fee of $_____ for _____ persons. (Doctors: $65.00; Auxiliary and Spouses $35.00 each)

Please make check payable to: C. R. Hostetler, D.D.S., and mail to: P. O. Box 2354, Santa Ana, California 92707.



Thiazides and hypertension

A balancing act: Blood pressure reduction vs potassium depletion

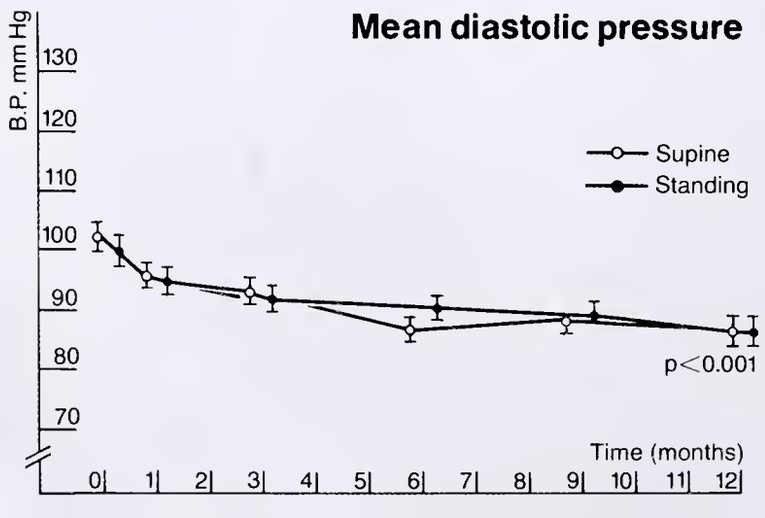
From a 1-year study of 18 patients with mild uncomplicated hypertension published in The Lancet*

Once a day

Naturetin®

Bendro-
flumethiazide
Tablets N.F.

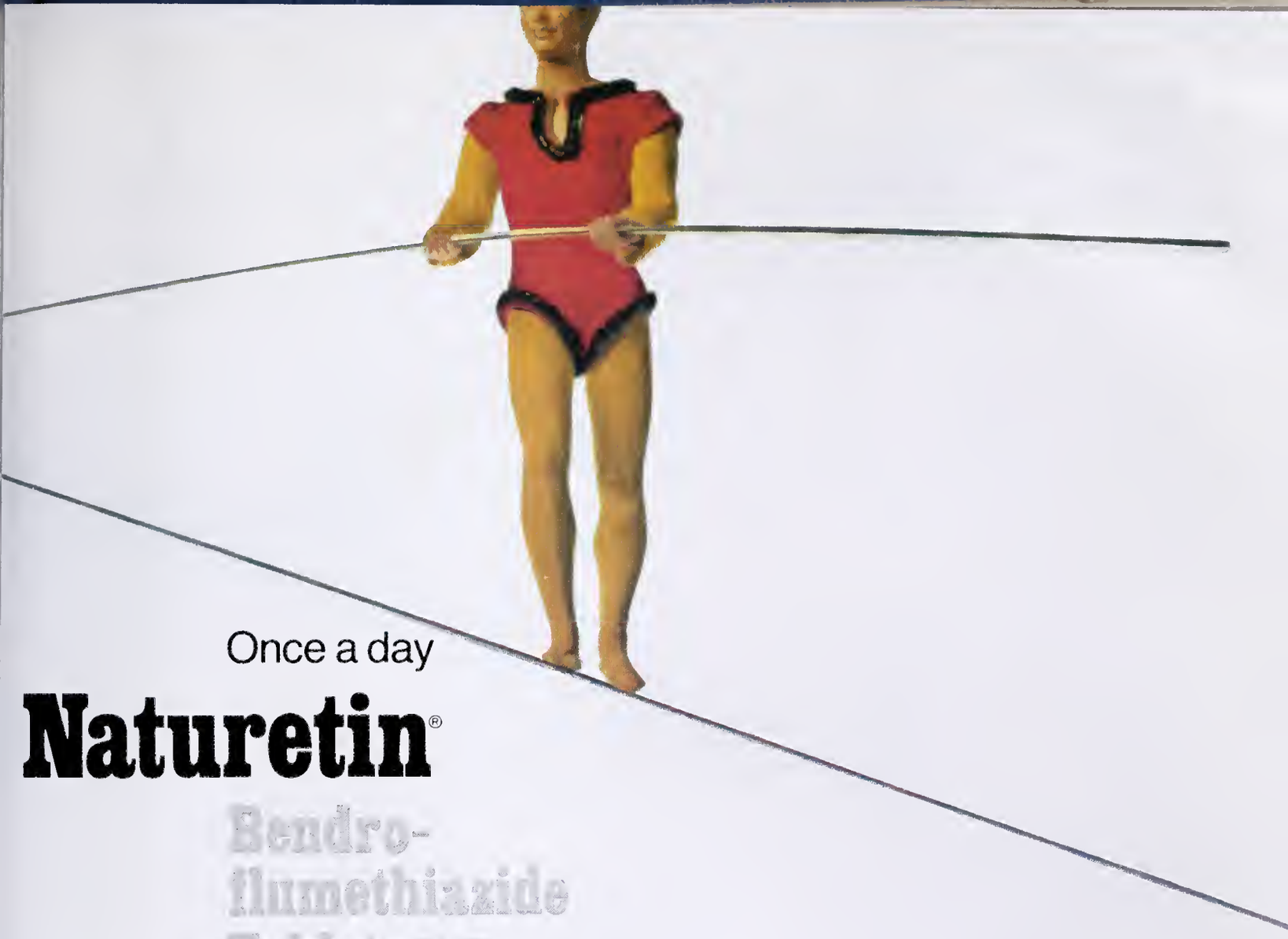
Diastolic blood pressure down 12-15%



"The mean pretreatment blood pressure was 170/103 mm Hg (supine) and 166/100 mm Hg (standing). Diastolic pressure continued to fall over the first 6 months and then there was no further change up to 1 year...The mean blood pressure at 12 months was 153/88 mm Hg (supine) and 142/88 mm Hg (standing)."

"The patients were receiving a single daily dose of 10 mg bendrofluazide [bendroflumethiazide]...there were no apparent side effects from the medication."

*Wilkinson PR et al: The Lancet 1:759-762, 1975.



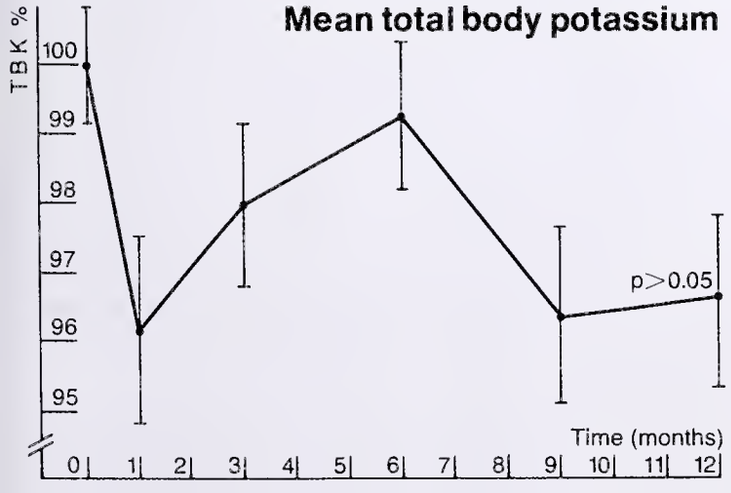
Once a day

Naturetin®

Bendro-
flumethiazide
Tablets N.F.

2.5, 5 and 10 mg

Potassium stabilized at 96% mean TBK



"The amount of potassium loss during the period of study did not seem to be clinically significant."

"A serum potassium of less than 3.5mmol per litre is often taken as the value below which potassium supplements should be given...At an arbitrary lower value for serum potassium of 3.0mmol per litre, few patients, our data suggest, would need potassium supplements. Our findings with TBK support this view..."

See next page for full prescribing information.

Once a day
Naturetin®
Bendroflumethiazide Tablets N.F.

NATURETIN®-2.5
NATURETIN®-5
NATURETIN®-10
Bendroflumethiazide Tablets N.F.

DESCRIPTION

Naturetin (Bendroflumethiazide Tablets N.F.) is a benzothiadiazine derivative containing a benzyl and a trifluoromethyl group. It is a potent oral diuretic and antihypertensive agent available as compressed tablets providing 2.5, 5.0, or 10 mg. bendroflumethiazide.

ACTIONS

The mechanism of action results in an interference with the renal tubular mechanism of electrolyte reabsorption. At maximal therapeutic dosage all thiazides are approximately equal in their diuretic potency. The mechanism whereby thiazides function in the control of hypertension is unknown.

INDICATIONS

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated as adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis and corticosteroid and estrogen therapy.

Bendroflumethiazide has also been found useful in edema due to various forms of renal dysfunction such as: nephrotic syndrome, acute glomerulonephritis, and chronic renal failure.

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated in the management of hypertension either as the sole therapeutic agent or to enhance the effectiveness of other antihypertensive drugs in the more severe forms of hypertension.

Usage in Pregnancy. The routine use of diuretics in an otherwise healthy woman is inappropriate and exposes mother and fetus to unnecessary hazard. Diuretics do not prevent development of toxemia of pregnancy, and there is no satisfactory evidence that they are useful in the treatment of developed toxemia.

Edema during pregnancy may arise from pathological causes or from the physiologic and mechanical consequences of pregnancy. Thiazides are indicated in pregnancy when edema is due to pathologic causes, just as they are in the absence of pregnancy (see WARNINGS). Dependent edema in pregnancy, resulting from restriction of venous return by the expanded uterus, is properly treated through elevation of the lower extremities and use of support hose; use of diuretics to lower intravascular volume in this case is illogical and unnecessary. There is hypervolemia during normal pregnancy which is harmful to neither the fetus nor the mother (in the absence of cardiovascular disease), but which is associated with edema, including generalized edema, in the majority of pregnant women. If this edema produces discomfort, increased recumbency will often provide relief. In rare instances, this edema may cause extreme discomfort which is not relieved by rest. In these cases, a short course of diuretics may provide relief and may be appropriate.

CONTRAINDICATIONS

Bendroflumethiazide is contraindicated in anuria.

It is also contraindicated in patients who have previously demonstrated hypersensitivity to it or other sulfonamide-derived drugs.

WARNINGS

Bendroflumethiazide should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may be additive or may potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

Usage in Pregnancy. Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers. Thiazides appear in breast milk. If use of the drug is deemed essential, the patient should stop nursing.

PRECAUTIONS

Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: dryness of the mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Latent diabetes mellitus may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use. If emergency surgery is indicated, preanesthetic and anesthetic agents should be administered in reduced dosage.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS

Gastrointestinal System: anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), and pancreatitis. *Central Nervous System:* dizziness, vertigo, paresthesia, headache, and xanthopsia. *Hematologic:* leukopenia, agranulocytosis, thrombocytopenia, and aplastic anemia. *Dermatologic-Hypersensitivity:* purpura, photosensitivity, rash, urticaria, and necrotizing angiitis (vasculitis, cutaneous vasculitis). *Cardiovascular:* orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates or narcotics. *Other:* hyperglycemia, glycosuria, occasional metabolic acidosis in diabetic patients, hyperuricemia, allergic glomerulonephritis, muscle spasm, weakness, and restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION

Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

Diuretic: The usual dose is 5 mg. once daily, preferably given in the morning. To initiate therapy, doses up to 20 mg. may be given once daily or divided into two doses. A single daily dose of 2.5 to 5 mg. should suffice for maintenance.

Alternatively, intermittent therapy may be advantageous in many patients. By administering the preparation every other day or on a three to five day per week schedule, electrolyte imbalance is less likely to occur; however, the possibility still exists.

In general, the lowest dosage that achieves the therapeutic response should be employed.

Antihypertensive: The suggested initial dosage is 5 to 20 mg. daily. Maintenance dosage may range from 2.5 to 15 mg. per day, depending on the individual response of the patient. When the diuretic is used with other antihypertensive agents, lower maintenance doses for each drug are usually sufficient.

STORAGE

Store at room temperature; avoid excessive heat.

HOW SUPPLIED

2.5 mg. tablets in bottles of 100, 5 mg. tablets (scored) in bottles of 100 and 1000, and 10 mg. tablets (scored) in bottles of 100.

SQUIBB®

©1977 E.R. Squibb & Sons, Inc. 477-501

Texas Physicians' Directory

DIRECTORY RATES & DATA: Space is available to TMA members at $12.50 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. Section headings are limited to those specialties designated by the American Medical Association. A list of these specialties is available upon request. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Clinics

THE FORT WORTH CLINIC
1221 West Lancaster Avenue, Fort Worth, Texas 76102
Telephone 817 336-7191

INTERNAL MEDICINE
Kendra J. Belfi, M.D.
John M. Church, M.D.
Thomas J. Coleman, M.D.
Robert R. Dickey, M.D.
Ferd E. Garrison, Jr., M.D.
Cortell K. Holsapple, M.D.
John E. Johnson, Jr., M.D.
O. M. (Jack) Phillips, M.D.

GENERAL SURGERY
John H. Sewell, M.D.
Robert L. Sewell, M.D.

ORTHOPEDIC SURGERY
Thomas E. Rapp, M.D.

CONSULTANTS IN RADIOLOGY
Victor E. McCall, M.D.
Dixon Presnall, M.D.
Harry H. Whipp, M.D.

FIFTH AVENUE CLINIC
650 Fifth Avenue, Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

MEDICAL ASSOCIATES OF CORPUS CHRISTI, P.A.
1533 South Brownlee, Corpus Christi, Texas 78404
Telephone 883-7411

FAMILY MEDICINE
Travis B. Phelps, M.D., F.A.A.F.P.
T. D. Harvey, M.D., A.B.F.P.
H. R. Rose, M.D., A.B.F.P.
C. L. Vernor, M.D.
Frederick S. Maurer, M.D.

ORTHOPEDIC SURGERY
C. M. Yanez, M.D., F.A.C.S.

INTERNAL MEDICINE
G. A. Reeves, M.D.
Pruett Moore, Jr., M.D.
Mark G. Strauss, M.D.

EXECUTIVE DIRECTOR
Gene Hybner

DIRECTOR OF NURSES
Pat Parker, R.N.

Remind your colleagues of your specialty and office location.
Purchase a listing in the "Texas Physicians' Directory."

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

INTERNAL MEDICINE
C. M. Maruri, M.D.
A. J. Nodarse, M.D.

GENERAL SURGERY
B. W. Hink, M.D., F.A.C.S.

FAMILY MEDICINE
J. H. Cochrane, Jr., M.D., F.A.A.F.P.
J. W. O'Bryant, M.D.
A. A. Piske, M.D.

FAMILY MEDICINE AND GENERAL SURGERY
Salvador Faus, M.D.

CLINIC MANAGER
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

MALONE AND HOGAN CLINIC
1501 West 11th Place, Big Spring, Texas 79720, Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.
W. B. Allensworth, M.D.

GENERAL SURGERY
C. B. Marcum, M.D., F.A.C.S.
J. E. Mathews, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
C. T. Moore, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
D. M. Logan, M.D.
V. T. Smith, M.D.

FAMILY PRACTICE
W. R. Strahan, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.
J. W. Kuykendall, M.D.

PEDIATRICS
J. M. Woodall, M.D.
B. R. Owen, M.D., F.A.A.P.

RADIOLOGY & NUCLEAR MEDICINE
Buerk Williams, M.D.
A. P. Goswami, M.D.

UROLOGY
J. W. Cowan, M.D.

PODIATRY
Bradford Glass, D.P.M.

PATHOLOGY
B. A. Campomanes, M.D.

CONSULTANT IN ELECTROENCEPHALOGRAPHY
M. L. Proler, M.D.

ADMINISTRATION
R. L. Heith, Administrator

RUGELEY AND BLASINGAME CLINIC
2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Richard R. Raphael

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.
W. C. Yankowsky, M.D.

UROLOGY
H. Z. Fretz, M.D.

DERMATOLOGY
T. S. Arrington, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

ANESTHESIOLOGY
C. G. Spears, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77030
Telephone 713 797-9191

Internal Medicine and Diagnosis

ALLERGY
Arthur T. Pedersen, M.D.

CARDIOVASCULAR DISEASE
Thomas J. Fatherree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.
Boguslaw Godlewski, M.D.
Matthew T. Monroe, M.D.

DERMATOLOGY
Samuel F. Bean, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Raymond L. Gregory, M.D.
R. Frederick Gregory, M.D.
Thomas J. Hanson, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.
Michael Gagliardi, M.D.
James K. Gordon, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George T. Conklin, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
George Burnazian, M.D.
Benjamin L. Portnoy, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.
James V. Ryan, M.D.

NEPHROLOGY
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

NEUROLOGY
Donald J. Russell, M.D.
George Isaacs, M.D.
Ernesto Infante, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.
Harry R. Price, M.D.
Edward L. Middleman, M.D.
Martin J. Hrgovic, M.D.

PATHOLOGY
Paul B. Radelat, M.D.
Ashok M. Balsaver, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.
Martin L. Kaplan, M.D.
Louis C. Waddell, Jr., M.D.

RADIOLOGY
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.
Joe B. Wilson, M.D.
Howard J. Pollock, M.D.

NUCLEAR MEDICINE
Donald A. Podoloff, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
Robert B. Hall,
Administrator
Richard V. Vanderslice,
Assistant Administrator

HOUSTON HEADACHE CLINIC
Park Plaza Professional Building
1213 Hermann Drive, Suite 855
Houston, Texas 77004
(713) 528-1916

Neurology
Ninan T. Mathew, M.D., F.R.C.P.(C)

Allergy

HOUSTON ALLERGY CLINIC
Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Richard H. Jackson, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Warren J. Raymer, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
D. W. Waddell, M.D., F.A.A.C.I.A.
Ramon Garrido, M.D., F.A.C.A., F.A.A.C.I.A.*
(Certified American Board of Pediatrics)
*Diplomate American Board of Allergy & Immunology

Suite 444, Hermann Professional Building
6410 Fannin St., Houston, Texas 77030, 713 797-0900

PETER B. KAMIN, M.D., P.A.
Certified American Boards of Pediatrics and Allergy
Diplomate American Board of Allergy and Immunology
Allergy and Immunology

Suite 601, Oak Hills Medical Building
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Phone 512 696-4405 or 227-6331

TMA Group Insurance Plans
. . . Another service of your association

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

JOHN P. McGOVERN, M.D.
Director-Consultant

THEODORE J. HAYWOOD, M.D.
ORVILLE C. THOMAS, M.D.
JOSEPH T. QUENG, M.D.
LAWRENCE G. THORNE, M.D.
K. VENUGOPALAN, M.D.
ROBERT E. SMITH, M.D.
JAMES A. AYERS, M.D.
EUNICE W. CHOU, M.D.
ALBERT LEHMANN, M.D.
GERALD T. MACHINSKI, M.D.

Research Associates
MICHAEL H. SMOLENSKY, Ph.D.
ALAIN REINBERG, M.D., Ph.D.
CALVIN J. McLERRAN, Ph.D.
MICHAEL A. McCORMICK, Ph.D.
GLENNA M. KYLE, M.S.
ITING MAY LU, M.S.

Consultants

EVAN M. HERSH, M.D.
JUDITH H. MARSTON, Ph.D.
Immunology

JAMES A. KNIGHT, M.D.
Psychiatry

HERBERT C. McKEE, Ph.D.
RICHARD K. SEVERS, Ph.D.
Air Pollution

CAROLYN S. LEACH, Ph.D.
Clinical Laboratories

JOHN A. THOMAS, Ph.D.
Clinical Pharmacology

THOMAS D. DOWNS, Ph.D.
Biometrics

WARREN E. SCHALLER, H.S.D.
Allied Health Sciences

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025, 713 661-1444

CORPUS CHRISTI ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology

2530 Morgan, Corpus Christi, Texas, 882-3487

STUART ALAN MASON, M.D., P.A.
Fellow American Association for Clinical Immunology and Allergy
Fellow of the American College of Allergists
Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

ALLERGY AND IMMUNOLOGY
Joseph T. Sams, M.D., P.A. or C. David Meadows, M.D., P.A.
Diplomates of the American Board of Allergy and Immunology

900 W. Randol Mill Rd., Suite 215, Arlington, Texas 76012, 817 277-1161

CHARLES A. RUSH, JR., M.D.
Diplomate/American Board of Allergy & Immunology
Fellow, A.A.A., A.C.A., A.A.C.I.A.

Northeast Medical Clinic Association
7601 Glenview Drive
Fort Worth, Texas 76118

FREDERICK W. GROVER, M.D. & ASSOCIATES
Diplomate of the American Board of Allergy and Immunology
Allergy and Immunology
Children and Adults
6114 Sherry Lane, Preston Center, Dallas, Texas 75225
Telephone: (214) 363-7790

MEMORIAL LIBRARY
TEXAS MEDICAL ASSOCIATION
1801 North Lamar Blvd., Austin, Texas 78701, 512 477-6704

A clinical library designed to assist the practicing physician

50,000 bound volumes • extensive reprint and periodical collection
• 400 lay and professional films • pathological slide sets
• cassette and reel-to-reel tapes from AMA, Audio Digest
• MEDLINE computer data service

. . . Another service of your association

Colon & Rectal Surgery

ALVIN BALDWIN, JR., M.D.
Diplomate American Board of Colon and Rectal Surgery

R. D. DIGNAN, M.D.
Diplomate American Board of Surgery
Diplomate American Board of Colon and Rectal Surgery

Suite 1209 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246
Telephone 824-2573

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery

2715 Fannin Street, Houston, Texas

C.D.L. CROMAR, M.D., M.S., F.R.C.S.E., F.R.C.S.C.
Surgery of the Rectum and Colon

Suite 8, 3337 Plainview, Pasadena, Texas 77504

FT. WORTH PROCTOLOGIC CLINIC, P.A.
Colon and Rectal Surgery and Colonoscopy

Sommai Sehapayak, M.D.
Diplomate American Board of Colon and Rectal Surgery

Medical Tower, Suite 210, 1550 West Rosedale,
Fort Worth, Texas 76104, 817-338-4501 (24 hours)

SUVID PITA, M.D.
Colon and Rectal Surgery
Colonoscopy

Barnett Tower, Baylor Medical Plaza
3600 Gaston Ave, Suite 411
Dallas, Texas 75246
Telephone 214 821-4300

MANUEL G. LAGON, M.D., F.A.C.S.
Diplomate American Board of Colon and Rectal Surgery

FORT WORTH COLON AND RECTAL CLINIC, P.A.
Colonoscopy, Colon and Rectal Surgery

909 Eighth Avenue, Fort Worth, Texas 76104; Telephone 332-1371

Dermatology

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy

1400 Eighth Street, Wichita Falls, Texas

DRS. PIPKIN AND RESSMANN
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies

714 Medical Arts Bldg., San Antonio, Texas 78205

JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
A Professional Association
Dermatology, Syphilology, and Cancer of the Skin

3801 19th St., Suite 500, Lubbock, Texas 79410

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies

7777 Forest Lane, Suite 214, Dallas, Texas 75230; Phone 661-7460

GERALD A. CASID, M.D., P.A.
Skin Diseases—Skin Tumors
Hair Transplantation, Dermabrasion, Chemical Peels

333 N. Shiloh Rd., Garland, Texas 75042
Phone 214 272-5451

DAVID S. ALKEK, M.D. AND ASSOCIATES
LON E. ROGERS, M.D.
Dermatology and Cancer of the Skin
Dermabrasion and Chemical Peel

8226 Douglas Avenue, Suite 755
Dallas, Texas 75225
Ph: 214 691-6691

Medical City
7777 Forest Lane
Dallas, Texas 75230

WILLIS I. COTTEL, M.D.
Practice Limited to Skin Cancer
Moh's Chemosurgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960

Endocrinology

ENDOCRINE ASSOCIATES OF DALLAS, P.A.
STANLEY FELD, M.D.
RICHARD SACHSON, M.D.
Practice Limited to Endocrinology

Douglas Plaza Bldg., Telephone: 363-5535
8226 Douglas Avenue, Dallas, Texas 75225

Family & General Practice

GLENN C. COATES, M.D.*
GENE V. HAVERLAH, M.D.
SAM A. NIXON, M.D.*
EUGENE M. TOKAR, D.D.S.
1303 Hospital Blvd., Floresville, Texas 78114, 512 393-2527
*Diplomate American Board of Family Practice

SAMUEL SILVA, M.D.
Hair Transplantation

4759 South Freeway, Fort Worth, Texas, 817 923-7374

TMA Members' Retirement Trust (Keogh)

. . . Another service of your association

Gastroenterology

CECIL O. PATTERSON, M.D., F.A.C.P.
Gastroenterology, Gastroscopy, Esophagoscopy
1414 Medical Arts Building, Dallas, Texas, 742-6141-44

MILFORD O. ROUSE, M.D., F.A.C.P.
Consultations in hospitals only

DRS. BAILEY, DOUGLAS AND DEVANEY ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
George T. DeVaney, M.D.
Nisar Ahmed, M.D.

KALMAN NARAYAN, M.D.
Diplomate American Board of Internal Medicine
Gastroenterology, Gastroscopy, Colonoscopy, Polypectomy, E.R.C.P.

909 8th Ave., Suite 7, Ft. Worth, Texas 76104, 817 336-9055

General Surgery

BURT B. SMITH, M.D., F.A.C.S.
Surgery
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery

728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery

1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Thoracic Surgery
Vascular, General and Thoracic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue,
Dallas, Texas 75246, 821-2356

ROBERT J. TURNER, III, M.D., F.A.C.S.
Diplomate American Board of Surgery
General and Peripheral Vascular Surgery

The Saint Joseph Professional Building
1400 South Main Street, Suite 104
Fort Worth, Texas 76104, 335-8311

ROBERT M. STECKLER, M.D.
Diplomate American Board of Surgery
Head and Neck Surgery, Surgery, and Surgical Oncology

Baylor Medical Plaza, Suite 1008, 3600 Gaston Avenue,
Dallas, Texas 75246, 214 827-9880

ROBERT DAVIS, M.D., M.B., B.Ch. (Rand), F.R.C.S. (Edin.)
General Surgery
430 Park Plaza Professional Building, 1213 Hermann Drive,
Houston, Texas 77004; 713 528-0597
By Appointment

Gynecology

RAYMOND H. ABRAMS, M.D., F.A.C.O.G.
Diplomate American Board of Obstetrics and Gynecology
Gynecological and Reconstructive Surgery

3434 Swiss Avenue, Suite 401, Dallas, Texas 75204
Telephone 214 823-1063

Hand Surgery

L. Lee Lankford, M.D. and Peter R. Carter, M.D.
HAND SURGERY ASSOCIATION
Hand Surgery and Upper Extremity Reconstructive Surgery

Baylor Medical Plaza, Barnett Tower, Suite 802, 3600 Gaston Avenue
Dallas, Texas 75246, 214 823-5351

Neurological Surgery

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery

Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Morris Sanders, M.D.
Phillip E. Williams, Jr., M.D.
Ira C. Denton, Jr., M.D.
W. Robert Hudgins, M.D.
Jack Woolf, M.D., Consultant

5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620,
Dallas, Texas 75235; 214 637-0420

8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905,
Dallas, Texas 75231; 214 369-7596

3600 Gaston Avenue, Barnett Tower, Baylor Medical Plaza, Suite 310,
Dallas, Texas 75246; 214 826-1976

JACK STERN, M.D., F.A.C.S.
GARY C. HUTCHISON, M.D., F.A.C.S.
THOMAS R. BOULTER, M.D., F.A.C.S.
Neurological Surgery

8210 Walnut Hill Lane, Suite 805, Dallas, Texas 75231, 363-8524

RONALD SMITH, M.D.
Neurological Surgery

901 South Lake, Fort Worth, Texas, 336-0551

EL PASO NEUROLOGICAL INSTITUTE
Professional Association
Neurology, Neurosurgery, Electroencephalography
Neuro-Radiology, Physiotherapy

William J. Nelson, M.D., Neurosurgery
John T. O'Neal, M.D., Neurosurgery
Robert D. Schneider, M.D., Neurology and Electroencephalography
Steven K. Crouse, M.D., Neurology and Electroencephalography

Medical Plaza Bldg., Suite 307
El Paso Medical Center
1501 Arizona Avenue, El Paso, Texas 79902
Telephone 915 532-8901

TMA International Travel Program
. . . Another service of your association

CHERRY-LONG NEUROSURGERY ASSOCIATION
GLENN R. CHERRY, M.D., D.A.B.N.S., F.A.C.S.
R. GORDON LONG, M.D., D.A.B.N.S., F.A.C.S.
BENNIE B. SCOTT, M.D.
Neurological Surgery
Baylor Medical Plaza — 605 Barnett Tower
3600 Gaston Avenue — Dallas, Texas 75246
Telephone 214 826-7060

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D., F.A.C.S.
E. FLOYD ROBINSON, M.D.
Neurological Surgery
2210 Maroneal, Houston, Texas 77025, 523-3684

TEXAS NEUROLOGICAL INSTITUTE AT DALLAS, P.A.
Neurological Surgery
James E. Bland, M.D.
Martin L. Lazar, M.D.

Medical Neurology, Electroencephalography and Electromyography
Ralph G. Greenlee, Jr., M.D.
Allan L. Naarden, M.D.
Richard R. North, M.D.
William S. Woodfin, M.D.

Neuro-Ophthalmology
Peter R. Bringewald, M.D.

Director, Pain Relief Center and Neuroanesthesiologist
P. Prithvi Raj, M.D.

Consultant in Speech
Josephine Simonson, M.A.

7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

SOUTHWEST NEUROSURGICAL ASSOCIATES
Richard H. Moiel, M.D.
Frank S. Yelin, M.D.
Homero R. Anchondo, M.D.
Arthur Evans, M.D.

601 Medical Towers, Houston, Texas 77030; 713 790-0795
7777 Southwest Freeway, #942, Houston, Texas 77074
902 Frostwood, #224, Houston, Texas 77024

Nuclear Medicine

NUCLEAR MEDICINE LABORATORIES OF TEXAS
Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., M.D., F.A.C.N.M.
Director - 713 790-0540
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, JR., M.D., F.A.C.N.M.
Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540

Diplomate American Board of Nuclear Medicine

Occupational Medicine

Eric G. Comstock, M.D.
Diplomate American Board of Medical Toxicology

OCCUPATIONAL TOXICOLOGY
1802 Medical Towers, Houston, Texas 77030; 713 790-0160

Ophthalmology

HOUSTON EYE ASSOCIATES
1100 Hermann Prof. Bldg., Houston, Texas 77030, 713 790-1100

Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D., F.A.C.S.
Malcolm L. Mazow, M.D., F.A.C.S.
Robert H. Stewart, M.D., F.A.C.S.
Robert B. Wilkins, M.D., F.A.C.S.
Jeffrey D. Lanier, M.D., F.A.C.S.
Michael A. Bloome, M.D., F.A.C.S.
Paul C. Salmonsen, M.D.
Richard L. Kimbrough, M.D.

DRS. ALPAR, TAYLOR, HOWELL, CURRIE & WEINBERGER
Ophthalmology
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Hugh B. Currie, M.D.
Bruce L. Weinberger, M.D.
Diplomates of the American Board of Ophthalmology
15 Medical Drive, Amarillo, Texas

TEXAS RETINA ASSOCIATES
Albert Vaiser, M.D.
William B. Snyder, M.D.
William L. Hutton, M.D.
Diseases and Surgery of the Retina and Vitreous

318 Medical Arts Building, Dallas, Texas, 748-0958

BRUCE C. TAYLOR, M.D.
RICHARD L. WINSLOW, M.D.
Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E., Dallas, Texas 75204
214 521-1153

McPHERSON ASSOCIATES
Diseases and Surgery of the Retina and Vitreous
Alice R. McPherson, M.D.
Robert A. Moura, M.D.
Arthur W. Willis, M.D.
Robert W. Butner, M.D.

6436 Fannin, Suite 800, Houston, Texas 77030
713 797-1903

EYE ASSOCIATES
Diseases and Surgery of the Eye
Charles A. Sargent, M.D.
Alan C. Baum, M.D.

3838 Hillcroft, #415, Houston, Texas 77027, 713 781-2882

CORPUS CHRISTI EYE ASSOCIATES
J. Gordon Bryson, M.D.
C. A. Struve, M.D.
John W. Lewis, M.D.

3166 Reid Drive, Corpus Christi, Texas 78404, Phone 853-7319

EYE CENTER OF AUSTIN
3913 Medical Parkway
Austin, Texas 78756; 512 451-8484

Edward J. Petrus, M.D.
Richard E. Nieman, M.D.

JOHN Y. HARPER, JR., M.D., P.A.
Diseases & Surgery of the Vitreous and Retina

601 Madison Square Medical Building
311 Camden Street, San Antonio, Texas 78212
512 226-1812

TMA Physicians' Placement Service
. . . Another service of your association

PETER R. BRINGEWALD, M.D.

Neuro-Ophthalmology

Texas Neurological Institute at Dallas, P.A.
7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

By appointment only.

COASTAL BEND EYE ASSOCIATES

Jack A. Sahadi, M.D.

712 Booty Street, Corpus Christi, Texas 78404
Telephone 512 888-4288

Orthopedic Surgery

H. H. Beckering, M.D.
L. Ray Lawson, M.D.
George Truett James, M.D.
Robert D. Vandermeer, M.D.
Wynne M. Snoots, M.D.
R. Stephen Curtis, M.D.

W. B. CARRELL MEMORIAL CLINIC

A Professional Association
2828 Lemmon Ave., Dallas, Texas

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas

Louis J. Levy, M.D.
Henry C. McDonald, Jr., M.D.
Fred W. Sanders, M.D.
James M. Beckley, M.D.
Joseph H. Gaines, M.D.

Ralph E. Donnell, M.D.
F. Carlton Hodges, M.D.
J. Price Brock, Jr., M.D.

ORTHOPEDIC ASSOCIATES

Diplomates American Board of Orthopedic Surgery

1133 N. 19th St., Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC

Joseph Barnhart, M.D.
Donald T. Lazarz, M.D.
Lee C. Detenbeck, M.D.
Thomas S. Padgett, M.D.

5620 Greenbriar, Houston, Texas 77005, 526-6262 and
Parkway Towers Professional Building, 150 West Parker Road,
Houston, Texas 77022, 691-3905

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr., M.D.
Kenneth C. Scholz, D.D.S., M.D.
G. S. Gill, M.D.

3702 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

THE ORTHOPEDIC GROUP OF RICHARDSON

Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.

Orthopedic Surgery

812 S. Central Expressway, Richardson, Texas 75080, 231-6396

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr., M.D.
E. E. Rising, Jr., M.D.*
C. Poindexter, M.D.
C. R. Vavrin, M.D.
Frank R. Vincenti, M.D.
Diplomates American Board of Orthopaedic Surgery
*Emphasizing Surgery of the Hand

801 West Randol Mill Road, Arlington, Texas 76012, 817 261-8284

ADDRESS CHANGE? Avoid missing or delayed mail. Send old and new address to Membership Department, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701.

LOUIS W. BRECK, M.D., P.A., F.A.C.S.

Diplomate American Board of Orthopaedic Surgery

Practice Limited to Orthopaedic Surgery

1209 North Kansas, El Paso 79902
Telephone 915 544-3831

THURSTON DEAN, M.D.

Diplomate American Board of Orthopedic Surgery

509 N. Garfield Street
Midland, Texas 79701
Telephone: 915 682-0433 or 682-0163

ORTHOPEDIC ASSOCIATES OF DALLAS

F. Leon Ware, M.D.
Dan R. Sutherland, M.D.
John B. Gunn, M.D.
Richard A. Shirley, M.D.
R. Dan Loyd, M.D.

Orthopedic Surgery

3600 Gaston Avenue, Suite 303
Dallas, Texas 75246; 214 823-7090

Otolaryngology

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.

Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

Otology

DANIEL McNAMARA MARTINEZ, M.D., F.A.C.S.

Otology and Otoneurology

8210 Walnut Hill Lane, Presbyterian Professional Building,
Suite 400, Dallas, Texas 75231; 214 691-7331

DALLAS HEARING, BALANCE AND OCULAR PULSE LABORATORY

Audiology—Vestibulometry—Non-invasive Carotid and Vertebral Circulation Studies

402 Presbyterian Professional Building, 8210 Walnut Hill Lane,
Dallas, Texas 75231; 214 691-7367

Pathology

FORT WORTH MEDICAL LABORATORIES

John J. Andujar, M.D.
Dorothy Patras, M.D.

1400 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

PRUITT MEDICAL LABORATORIES

Jack Pruitt, M.D.
E. Hernandez, M.D.
Diplomates, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology,
Medicolegal Consultation
P. O. Box 160, Lufkin, Texas 75901, 634-4451

TMA Automobile Lease Program
. . . Another service of your association

BROWN & ASSOCIATES MEDICAL LABORATORIES

Clinical Pathology, Hematology, Surgical Pathology, Exfoliative Cytology and Electrophoresis

Wilson G. Brown, M.D.
George V. Miller, M.D.
Walter G. Olin, Jr., M.D.
John R. Thomas, M.D.
S. Joseph Skinner, M.D.
Joe B. Haden, M.D.
Enrique van Santen, M.D.
Elaine V. Shalek, M.D.
Robert H. McNeely, M.D.

Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas 77030
220 Park Plaza Prof. Bldg., Houston, Texas 77004
Telephone 527-5230
Mailing Containers on Request—Office Pickup Service in Houston

WACO CLINICAL PATHOLOGY LABORATORY

K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Robert Wayne Walter, M.D., F.A.C.P.
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation

Mailing Containers on Request
2112 Washington Ave., P.O. Box 3160, Waco, Texas 76707, 756-7226

J. S. Wilkenfeld, M.D., Medical Laboratories, Inc.

J. S. WILKENFELD, M.D. ENA E. MOCEGA, M.D.

Diplomates of the American Board of Pathology

Anatomical Pathology, Clinical Pathology Exfoliative Cytology and Dermatopathology

8850 Long Point Road, P.O. Box 55008
Houston, Texas 77055, 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

ARTHUR L. RAINES, M.D. AND ASSOCIATES

Pathologists

DIPLOMATES, AMERICAN BOARD OF PATHOLOGY

Clinical Pathology — Surgical Pathology
Exfoliative Cytology — Medicolegal Consultation
Hospital and Clinic Laboratory Consultation
P. O. Box 118, Cleburne, Texas 76031
817 645-9181, Ext. 360

MAILING CONTAINERS ON REQUEST

HENRY B. OWENS, M.D., F.C.A.P.

Diplomate American Board of Pathology

Cytology and Tissue Pathology Only

801 E. Border St., Suite M, P. O. Box 1627
Arlington, Texas 76010, 817 461-2771

Mailing Containers on Request—Office Pickup Service in Arlington

PATHOLOGY ASSOCIATES OF TEXAS

Medical Laboratory

1050 W. Magnolia, Fort Worth, Texas 76104
P. O. Box 2176 Zip Code 76101, 817 335-5297
Diplomates, American Board of Pathology

May Owen, M.D.
John W. Alexander, M.D.
John E. Bremner, M.D.
Vincent C. Cirone, M.D.
Donald M. Cohen, M.D.
Robert W. Collison, M.D.
C. D. Fitzwilliam, M.D.
Feliks Gwozdz, M.D.
Alcina F. Jatoi, M.D.
Raoul Kunert, M.D.
Charles B. Mitchell, M.D.
B. V. Ramakrishna, M.D.
Richard C. Schaffer, M.D.

Consulting Toxicologist: Jack E. Wallace, Ph.D.

Branch Laboratory Facilities

Doctor's Building, Suite 109
800 Fifth Avenue
Fort Worth, Texas
335-5297 (Ext. 31 and 60)

Medical Tower Building, Suite 219
1550 West Rosedale
Fort Worth, Texas
335-5297 (Ext. 32 and 62)

Medical Plaza Building, Suite 110
800 Eighth Avenue
Fort Worth, Texas
335-5297 (Ext. 57 and 59)

H.E.B. Medical and Dental Center, Suite 401
2700 Tibbets Drive
Bedford, Texas
283-2861

"Every man owes some of his time to the upbuilding of his profession"
—Theodore Roosevelt

Take an active role in TMA and your county society.

Physical Medicine & Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES WARM SPRINGS FOUNDATION, INC.

P. O. BOX 58, GONZALES, TEXAS 78629

Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade
DAVID E. GUMPER, Administrator
LARRY E. BROWNE, M.D., Medical Director

ROBERTO G. ROLFINI, M.D.

Diplomate American Board of Physical Medicine & Rehabilitation

Rehabilitation Medicine and Electromyography

702 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205, Telephone 226-2424

SHOAL CREEK REHABILITATION CENTER

3501 Mills Avenue, Austin, Texas 78703, 512 452-0361

Rodney J. Simonsen, M.D., Medical Director
Joe T. Powell, M.D., Associate Director

Comprehensive rehabilitation facilities for spinal cord injury, stroke, head injury, pain management, and related conditions

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D., F.A.C.S.
THOMAS M. BIGGS, M.D., F.A.C.S.
LAURENCE E. WOLF, M.D.
Diplomates American Board of Plastic Surgery

PLASTIC SURGERY

5419 Caroline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.

Plastic, Maxillo-Facial and Hand Surgery

530 Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

JOHN B. PATTERSON, M.D., F.A.C.S.

Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Cosmetic Surgery

612 Doctors Bldg., Fort Worth, Texas 336-0356

PLASTIC SURGERY ASSOCIATES

Simon Fredricks, M.D., F.A.C.S.
Jonathan J. Dora, M.D.

Aesthetic, Plastic, Reconstructive and Hand Surgery

1103 Medical Tower, Houston, Texas 77030, 795-5575

DAVID A. GRANT, M.D., F.A.C.S.

Diplomate American Boards of Surgery and Plastic Surgery

Plastic & Reconstructive Surgery
Cosmetic Surgery

606 Medical Plaza Bldg., 800 Eighth Avenue, Fort Worth, Texas 76104, 335-4751

VALENTIN GRACIA, M.D., P.A., F.A.C.S., F.I.C.S., D.A.B.

Aesthetic Surgery—Burns

1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

PATRICK H. BECKHAM, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1111 West 34th Street, Suite 207, Austin, Texas 78705, 459-3258

WILLIAM E. BARNES, M.D.
Diplomate American Board of Plastic Surgery

Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 608, Austin, Texas, 454-7659

JOHN E. CARTER, M.D., P.A.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Plastic Surgery

7711 Louis Pasteur Drive, San Antonio, Texas 78229
Telephone: (Area Code 512) Office 696-2390 Medical Exchange 227-6331

JOSEPH C. FORD, M.D., P.A., F.A.C.S.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Plastic Surgery

508 Madison Square Medical Building
311 Camden, San Antonio, Texas 78215, 224-5509

BROMLEY S. FREEMAN, M.D., F.A.C.S.
D. ROBERT WIEMER, M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery

Plastic & Reconstructive Surgery

7000 Fannin, Suite 1770, Houston, Texas 77025
713 795-5584

JACK L. CONLEE, M.D.
Diplomate American Board of Plastic Surgery

Plastic and Cosmetic Surgery

3318 S. Alameda, Suite 1, Corpus Christi, Texas, 855-7359

PLASTIC SURGERY ASSOCIATION
LEONARD KOCH, M.D.

Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410, 806 792-2313

ROBERT L. CLEMENT, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery

Plastic, Reconstructive Surgery

1111 West 34th Street, Suite 205, Austin, Texas 78705, 512 459-3101

STEPHEN C. LESAUVAGE, M.D.
Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1318 Clinic Drive, Tyler, Texas 75701; 214 593-8296

JOSEPH P. FLEMING, M.D., F.R.C.S.(C), F.A.C.S.

Plastic and Reconstructive Surgery

1213 Hermann Drive, Suite 645, Park Plaza Professional Building
Houston, Texas 77004; 713 524-7545

JUDSON L. CROW, M.D.
Diplomate, American Board of Surgery
Diplomate, American Board of Plastic Surgery

Plastic and Reconstructive Surgery

730 N. Main—Suite 716, San Antonio, Texas 78205, 512 224-2075

Psychiatry

Perry C. Talkington, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Larry R. Kimsey, M.D.
Charles M. Smith, M.D.
Gregory G. Dimijian, M.D.
Linda R. Hughes, M.D.
Roy H. Fanoni, M.D.
Byron Howard, M.D.
Larrie W. Arnold, M.D.
Madeline W. Harford, M.D.
John G. Looney, M.D.

Practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

ALAN B. BRINSMADE, M.D.
General Psychiatry
Specializing in Psychotic Illnesses-Acute and Chronic

Hermann Medical Center Professional Building
Houston, Texas 77025, 713 524-8496

PERRY C. TALKINGTON, M.D.
Psychiatry

4645 Samuell Blvd., Dallas, Texas 75228, 214 381-3849

FABRE CLINIC

LOUIS F. FABRE, JR., M.D., Ph.D.
Certified in Psychiatry by the American Board of Psychiatry and Neurology

Individual and Group Psychotherapy
Children — Family — Alcoholism

Free of charge to patient MEDICATION CLINIC
FOR PATIENTS WITH ANXIETY OR DEPRESSION
IN CONJUNCTION WITH CNS RESEARCH WITH
PSYCHOPHARMACOLOGICAL COMPOUNDS

DAVID McLENDON, Ph.D.
Licensed Clinical Psychologist

Individual and Group Psychotherapy
Diagnostic Evaluations and Counseling

H. JOHN JACKSON, Ed.D.
Educational Psychologist

Administrative Consultation to School District
Program Organization Consultation
Individual Family Counseling

5503 Crawford Street, Houston, Texas 77004, 713 526-2328

Texas Continuing Education Directory
. . . Another service of your association

HARRIS HAUSER, M.D. AND ASSOCIATES
Psychiatry

Frank H. Chesky, M.D.
Jose A. Gutierrez, M.D.
Harris M. Hauser, M.D.
Linda S. Blume, A.C.S.W.

7777 Southwest Freeway, Suite 1004, Houston, Texas 77074; 713 772-4600

1740 West 27th, Suite 315. Houston, Texas 77008; 713 772-4600

Psychiatry & Neurology

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., J. J. Leyva, M.D.

Department of Psychology
Allen Goss, Ph.D., Jim M. Phillips, Ph.D.
Practice Limited to Neurology and Psychiatry
Office Hours By Appointment
First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

STEPHEN WEISZ, M.D.
Practice Limited to Neurology and Psychiatry

1637 Medical Arts Bldg., Dallas, Texas 747-5183

THE FORT WORTH NEUROPSYCHIATRIC CENTER
•Herbert G. Rush, M.D.
A. Arauzo, M.D.
Sanford Lehrer, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

•Diplomate American Board of Psychiatry and Neurology

H. KORNBLIT, M.D.
Neurology—Headache Clinic

Memorial City Prof. Bldg. #176
902 Frostwood, Houston, Texas 77024

HAUSER CLINIC
Psychiatry, Neurology, Electroencephalography and Electromyography

Section of Psychiatry
•Abe Hauser, M.D.
•Robert I. Hauser, M.D.
•H. James Stuart, M.D.
Javier A. Zapata, M.D.
•Susan B. Darsey, M.D.
•Harvey A. Rosenstock, M.D.

Section of Psychology
Ken R. Vincent, Ed.D.

Administrator
Richard J. Kurzenberger

Section of Neurology
•Gerald Ratinov, M.D.
•Robert M. Gordon, M.D.
•Ronald DeVere, M.D.

Section of Social Work
Pamela Plimmer, A.C.S.W.
Marguerite Papademitriou, A.C.S.W.
Margery Engel, M.S.S.W.
Jean Lerner, M.S.W.

808 Memorial Professional Building, Houston, Texas 77002
Telephone 713 224-5041

•Diplomate, American Board of Psychiatry and Neurology

TMA Action/TMA Legislative Bulletin
. . . Another service of your association

MEMORIAL NEUROLOGICAL ASSOCIATION
Neurology, Electroencephalography, Electromyography and C. T. Scan

James L. Frey, M.D.
Harris M. Hauser, M.D., F.A.A.N.
Cheor J. Kim, M.D.
Lorenzo Lorente, M.D.

1740 West 27th, Suite 315, Houston, Texas 77008, 713 861-4516
427 West 20th, Suite B100, Houston, Texas 77008, 713 868-4552
7777 Southwest Fwy., Suite 1004, Houston, Texas 77074, 713 772-4600

HAUSER PSYCHIATRIC ASSOCIATES
Psychiatry and Neurology
•Ronald J. Hauser, M.D., F.A.P.A.

Individual and Group Therapy
Marital and Family Counseling

Laurence J. Gross, M.S.W., S.P.
Judy Kanas, M.S.W., S.P.

•Diplomate, American Board of Psychiatry and Neurology

9100 Westheimer, Suite 40
Houston, Texas 77063; 781-6742

Radiology

ROYAL WERTZ, M.D., F.A.C.R.
Practice Limited to Radiology

800 Rusk Street, Amarillo, Texas 79106, 373-8324

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D., D.A.B.R.

RADIOLOGY
109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

KARL THORD DOCKRAY, M.D.
Diplomate, American Board of Nuclear Medicine
Diplomate, American Board of Radiology

Roentgenology, Nuclear Medicine, Xeromammography

763-5774 Office 765-7701 Page 762-0471 Mobile
Lubbock, Texas

Rheumatology

DON E. CHEATUM, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204, 823-4151

ROY M. FLEISCHMANN, M.D.
Diplomate American Board of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

3707 Gaston Avenue, Suite 810, Dallas, Texas 75246; 827-0868

Thoracic Surgery

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.
Maruf A. Razzuk, M.D.

DRS. PAULSON, URSCHEL, RAZZUK AND ASSOCIATES

Thoracic and Cardiovascular Surgery

1201 Barnett Tower
3600 Gaston Avenue, Dallas, Texas 75246; 824-2503

JOHN L. KEE, JR., M.D.

Thoracic Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246; 826-5184

ALLAN L. GRAHAM, M.D., F.A.C.S.
KARAMAT U. CHOUDHRY, M.D., F.A.C.S.

Diplomates American Board of Surgery and Board of Thoracic Surgery

ROBERT W. MILEY, M.D.

Diplomate American Board of Surgery

Cardiac, Thoracic and Vascular Surgery Associates

800 Eighth Ave., Suite 626, Fort Worth, Texas 76104: 332-7878

HECTOR O. YANES, M.D., P.A., F.A.C.S., F.A.C.C.

Cardiac, Vascular and Thoracic Surgery

Diplomate American Board of Surgery and
American Board of Thoracic Surgery

432 Medical Plaza, 800 Eighth Ave.,
Fort Worth, Texas 76104, 332-1947

RICHARD E. WOOD, M.D.

Cardiac, Thoracic and Vascular Surgery

Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890

Hours By Appointment

Hugh E. Wilson, M.D. and Associates

HUGH E. WILSON, M.D.
CHARLES T. MEADOWS, M.D.

Thoracic and Cardiovascular Surgery

6161 Harry Hines Boulevard
Dallas, Texas 75235; 214 637-3470

Urology

JO C. ALEXANDER, M.D., FOSTER FUQUA, M.D., ELGIN W. WARE, JR., M.D., GEORGE E. HURT, JR., M.D., DONALD E. JOHNSON, M.D. & ASSOCIATES L. MICHAEL GOLDSTEIN, M.D., THOMAS P. REILLY, M.D.

Urology

3600 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC

Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109

Dolphus E. Compere, M.D., F.A.C.S.
Grant F. Begley, M.D., F.A.C.S.
Hugh Lamensdorf, M.D., F.A.C.S.

Diplomates of American Board of Urology

H. M. GIBSON, JR., M.D., F.A.C.S.
ABEL GARDUNO, M.D.

Certified by American Board of Urology

Practice Limited to Urology

512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephone 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
NEWTON F. McDONALD, M.D.
JAMES E. MORNEAU, M.D.

Practice Limited to Urology

1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

DONALD J. NEESE, M.D.

Diplomate of American Board of Urology

Practice Limited to Urology

570 Park Plaza Professional Building
1213 Hermann Drive, Houston, Texas 77030; 713 524-3931
400 Medical Center Blvd., Suite 207, Webster, Texas 77598; 713 332-2466

EUGENE R. TODD, M.D., P.A.

Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3434 Swiss Ave., Suite 406, Dallas, Tex. 75204, 214 826-3500

DALLAS UROLOGY ASSOCIATES

David D. Reisman, M.D.
Donald J. Logan, M.D.
Allen S. Plotkin, M.D.
Donald L. McKay, M.D.

Practice Limited to Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

JOSEPH D. MITCHELL, JR., M.D.
TROY W. SCOTT, M.D.

Urology

Barnett Tower, Suite 906, Baylor Medical Plaza,
3600 Gaston Avenue, Dallas, Texas 75246

Scenic Sawmill Creek—
for the sporting life
and CME

AMA's Regional CME
Sawmill Creek
Huron, Ohio
Oct. 7-9, 1977

Write:
Dept. of Meeting Services
American Medical Association
535 N. Dearborn St.
Chicago, Ill. 60610

Classified Advertising

Physicians Wanted

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from the big city problems. Call collect Dr. David M. Pogue, at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIAN AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6383.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

EMERGENCY DEPARTMENT GROUP, HOUSTON AREA, EXPANDING—choice of salary or fee-for-service with guarantee—malpractice paid—Call 713-861-7942 or write Greater Houston Emergency Physicians Association, 625 West 19th, Houston, Texas 77008.

FAMILY PRACTICE—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas 512-672-2811.

FAMILY PRACTITIONER WANTED to join two established family practitioners in Trinity, Texas. Former partner is leaving November 1976 for residency. A large ready made practice is available now. You are invited to investigate clinic and hospital facility, compatibility, economic and environment of rural practice in an outstanding recreational area that includes 2,000,000 acres of East Texas forest, 90,000 acre Lake Livingston, various golf courses, marinas, and country club developments. All guarantees, etc. are negotiable. Bring your wife. Sam R. Barnes, M.D. and J. Richard Cook, M.D., P.O. Box 672, Trinity, Texas 75862.

GENERAL PRACTITIONER NEEDED: To work with general surgeon doing GP work. Excellent opportunity for a doctor desiring family practice work. May start with salary of $45,000 per year negotiable. City has population of 9,000 with trade area of 25,000 to 30,000. Contact Chris S. Cruzcosa, M.D., 300 S. 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

PHYSICIAN WANTED TO JOIN three-man group; two GP's, general surgeon (all Board). Practice in Hearne, Texas, population 5,000; drawing area 12,000+. Contact Dr. Ken Kennamer, Hearne, Texas; 713-279-3451 or 713-279-3100.

FAMILY PRACTICE, GENERAL PRACTICE—Wanted immediately to join physician staff in rural community one-hour from Dallas-Fort Worth area. Extremely active practice with good benefits and an opportunity to enter into the corporation. Practice is with physicians clinic, 26-bed hospital, and 42-bed nursing home within the same building complex. Excellent arrangement for family practice. For further information contact Roger E. Marks, M.D., 817-897-2215 or 817-897-4436; Glen Rose, Texas.

GENERAL INTERNIST AND FAMILY PRACTITIONER NEEDED to join nine man group in Clifton, Texas. Located in the heart of Texas, 30 miles NW of Waco; 15 miles from Lake Whitney. Good fishing; excellent hunting; new modern golf course. Excellent schools and churches in a growing progressive community and directly associated with a 75 bed, Hill Burton hospital which is fully accredited by the joint commission. Terms open at first with partnership in future. Please contact V. D. Goodall, M.D., Clifton Medical & Surgical Clinic Association, Clifton, Texas 76634. Telephone 817-675-8621 or 675-3113.

PUBLIC HEALTH DIRECTOR: The City of Austin, Texas, is accepting applications for the position of Director, Austin-Travis County Health Department. Full medical and administrative direction of local public health activities in a $4 million department of the City. Must be an MD with administrative experience; Texas license and MPH preferred. Salary starts at $35,000+, depending upon qualifications. Send resume to: Dan H. Davidson, City Manager, P.O. Box 1088, Austin, Texas 78767; 512-477-6511. Equal employment opportunity.

PHYSICIANS WANTED—Growing hospital in progressive East Texas town near metroplex needs ambitious physicians to join staff. Write Paul Bennet, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75647.

INDUSTRIAL PHYSICIAN TO JOIN multispecialty group as an addition to a large industrial department. Some surgical training desired; family practice boards acceptable. Work consists of pre-employment physicals, industrial injuries, and family practice. Salary and partnership negotiable and competitive. Keogh plan available. Adequate time off. Modern clinic facilities. Growing town of 125,000. Send curriculum vitae and references to Harry Ledbetter, M.D., 1518 Tenth Street, Wichita Falls, Texas 76301.

TEXAS, NORTHEAST: Emergency physicians. Immediate openings available in established ACEP oriented group. Positions in several communities available. Prefer career-oriented emergency MDs. Additional training and/or experience required. Flexible schedule, fee-for-service with guarantee and usual fringes including malpractice insurance. Write: Emergency Medicine Consultants, 3600 Gaston Avenue, Dallas, Texas 75246, or call 214-823-6850.

GENERAL SURGEON: American graduate, preferably just out of residency to do all major surgery for well established clinic. Please reply to Ad-722, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTITIONER, before you decide on a location to practice, invest five minutes of your time in a collect call to: Gerald Moore, Lynn County Hospital District, Tahoka, Texas; 806-998-4533.

HOUSTON EMERGENCY PHYSICIANS ASSOCIATES has immediate openings for career oriented emergency physicians with surgical or emergency medicine backgrounds. Continuing education required. Teaching and non-teaching positions available in the city limits of Houston, Texas. Our physicians' present salaries are between $50,000 and $80,000 per annum based on tenure and experience. Flexible scheduling to allow for vacations and continuing education. Benefits include malpractice insurance, major medical, life, disability income. Call or send CV: Houston Emergency Physicians Associates, P. O. Box 36949, Houston, Texas 77036; 713-776-1081.

PRIMARY CARE POSITIONS available immediately. Assistance with travel, office overhead, and salaries or guarantees negotiable. For details send CV and preferences to Ad-725, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

NEED FULL TIME PHYSICIAN at medical facility of Gary Job Corps Center in resort community of San Marcos, Texas. Involvement is 8 a.m. to 5 p.m., Monday through Friday and on call alternate nights and weekends. Fringe benefits include a desirable housing arrangement and prepaid malpractice insurance. Salary upper $30s and negotiable. Contact Dr. M. D. Heatly, 512-396-6570 or at night 392-3044; or Mr. Al Martinez, Hospital Administrator, 396-6422; or write P.O. Box 645, San Marcos, Texas 78666.

GENERAL PRACTITIONER NEEDED to join a group of 4 active GPs. Large suburban area. Open staff hospitals. Recreational and educational facilities available. Salary open. Robert E. Chapman, M.D., Fort Worth, Texas 76117; 817-834-8101.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $10.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

NEEDED: PHYSICIANS to practice at Mexia State School, located in Central Texas just 30 minutes east of Waco. Many fringe benefits: retirement, sick leave, vacation, 40-hour week, group insurance. Salary range $34,300 to $38,300 depending on qualifications. An equal opportunity employer. Contact Medical Director, Mexia State School, P. O. Box 1132, Mexia, Texas 76667. 817-562-2821.

VIGOROUS, PROGRESSIVE, ESTABLISHED multispecialty group. West Texas Medical Associates invites qualified internists, general surgeons, orthopedists, urologists, anesthesiologists, pediatricians to practice in San Angelo, Texas, a university community. Telephone: Administrator, 915-655-5761, ext. 211.

STUDENT HEALTH SERVICE—Beautiful campus, competitive salary and benefits, East Texas recreational area. New clinic in planning. Contact Capt. A. C. Harris, USN (Ret.), Box 3058 SFA, Nacogdoches, Texas 75962; 713-569-4008.

EMERGENCY MEDICINE, DALLAS AREA: Immediate opening for full time, experienced emergency room ER physician. Flexible shifts. Competitive remuneration. Contact Dr. R. Murchison, 6350 LBJ Freeway, Suite 282, Dallas, Texas 75240; 415-472-0130 or 214-233-9088.

THE HILLS OF HOME IS THE TITLE OF A BEAUTIFUL Scottish song. It is especially applicable to East Texas. Are you tired of traffic congestion, high overhead, hassles with office personnel, high crime rates? Do you long to own a farm or ranch of your own where you can enjoy nature? If so, write us as we are taking application from licensed physicians and psychiatrists. Our hospital is modern, JCAH approved, and program oriented. Salaries: Physicians, $32,800-35,800, depending on qualifications; Psychiatrists, $35,800-43,800, depending on qualifications. Housing available on the grounds. Contact Rusk State Hospital, Box 318, Rusk, Texas 75785; Dave Everly, 214-683-3411. An equal opportunity employer.

TEXAS PRACTICES. Economic and professional climate excellent. Have requests from physicians in Texas communities for additional physicians, usually in the same field. City suburbs, small and medium size towns. Attractive financial guarantees. No fee to physician candidate. Please write with C.V. and preferences to Sanford Smith, Professional Practice Management, Inc., 1102 Kingwood Drive, Humble, Texas 77339.

LOCUM TENENS WANTED. 3-6 months. Start immediately. To assist three other doctors in industrial clinic. No nights or weekends. Prefer young graduate. Malpractice paid. $3,500 month. Contact: Drs. Frierson, Wolf or Frnka, 2403 Caroline, Houston, Texas 77004.

DIRECTOR OF PUBLIC HEALTH, WACO, TEXAS. Exciting mix of administrative and clinical responsibilities in a dynamic City-County Health Department with a staff of 70 employees. Position requires ability to supervise and direct a program involving direct health services, epidemiological investigations, health education and consultation to the medical profession in the fields of communicable diseases and community health problems. Reports to the City Manager. The City of Waco is a city of 100,000 with big city advantages without their problems. Fine shopping centers and excellent cultural and recreational facilities. Salary is open with exceptional fringe benefits. Must be graduate of accredited school of medicine, preferably supplemented by Masters degree in public health with several years experience in community health activities. Send resume to: Director of Personnel, City of Waco, P.O. Box 1370, Waco, Texas 76703. An equal opportunity employer.

NEEDED: TWO FAMILY PRACTITIONERS, 40 bed hospital with hospital owned clinic, both fully equipped. Present active staff of two physicians. Financial arrangements negotiable with aggressive board of directors, unlimited growth. Caprock Hospital District, 901 West Crockett Street, Floydada, Texas 79235. Phone 806-983-2875, collect.

TEXAS, NORTH CENTRAL. Emergency physicians needed August 1, 1977 to complete full-time group in a 177-bed hospital. Excellent staff back-up. Small town near Dallas. Numerous recreational opportunities nearby. Call Kalman Shwarts, M.D., 214-872-5011 or 214-874-5611, ext. 300.

GENERAL PRACTITIONER TO DIRECT ALCOHOLISM PROGRAM. Building a better and more dynamic program in state hospital. Ideal family living town of 30,000—good schools, recreation, mild west Texas weather. Salary $37,000 to $40,000. Texas license required. Call or write: Douglas Cheney, Personnel Director, Big Spring State Hospital, Box 231, Big Spring, Texas 79720. 915-267-8216.

PRACTICE in the most sophisticated Texas city. Enjoy the small town atmosphere. Explore Pleasant Grove Hospital, first medical facility ever for 170,000 citizens in Southeast Dallas County. 172-bed hospital, now open, adjacent to professional building due completion September. Explore the possibilities with A. D. Hethcock, 214-398-1531.

INTERNAL MEDICINE—Opening now. One hour from Texas Medical Center. Multi-specialty group. 45 miles to Gulf. Excellent first year guarantee plus incentive and fringe benefits. Friendly community living with all the Houston amenities without big city problems. Contact Internal Medicine Search Committee, 3027 North Richmond Road, Wharton, Texas 77488.

PEDIATRICIAN TO JOIN multispecialty group in El Paso, Texas. Malpractice paid, 5 weeks vacation, retirement. Call Rodney Bobbitt, M.D., 915-592-0201.

ENT TO JOIN multispecialty group in El Paso, Texas. Malpractice paid, five weeks vacation, retirement. Call Rodney Bobbitt, M.D., 915-592-0201, ext. 1680.

OPHTHALMOLOGIST TO JOIN multispecialty group. Five weeks vacation, retirement, malpractice paid. El Paso, Texas. Call Rodney Bobbitt, M.D., 915-592-0201, ext. 1680.

2ND ORTHOPEDIST TO JOIN multispecialty group in El Paso, Texas. Full partnership after one year. $6,000 monthly, benefits. Malpractice paid. Call 915-592-0201, ext. 1680, R. D. Bobbitt, M.D.

DIAGNOSTIC RADIOLOGIST—trained in nuclear medicine, angiography, ultrasound to fill opening in four member radiology group with office and two hospitals in Lower Rio Grande Valley. Attractive fringe benefits and salary leading to full partnership. Send curriculum vitae. Drs. Martin, Chapa, Baker and Sokolosky, 1616 Ed Carey Drive, Harlingen, Texas 78550.

WANTED: BOARD QUALIFIED OR CERTIFIED INTERNIST to work in a three man group. Salary open. Good fringe benefits. Large, growing practice, in Texas Medical Center. Reply to 7000 Fannin, Suite 720, Houston, Texas 77030.

INTERNIST AND TWO FAMILY PRACTITIONERS NEEDED to complement present staff. Progressive city serving a trade area of 50,000. Excellent 100 bed accredited hospital. Great place to raise family. Fishing, hunting and golf. Financial assistance, office available. Contact Billy Robertson, Wilbarger General Hospital, 920 Hillcrest Drive, Vernon, Texas 76384. Telephone 817-552-9351.

INTERNIST—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

FAMILY PRACTITIONERS, GENERAL INTERNISTS, AND PEDIATRICIANS NEEDED immediately. Excellent earning potential. For information send C.V. and preferences to The Texas Doctors Group, a Physician Search-Placement Service, 507 First Federal Plaza, Austin, Texas 78701 or call when in Austin, telephone 476-7129.

Situations Wanted

SEEKING LOCATION: 31 year old board certified otolaryngologist. Presently serving military obligation which will be completed July 1978. Trained in general ENT, head and neck oncology, otology and facial plastics. Contact Bruce Meyers, M.D., 1017-B Drennan Park, Fort Campbell, Kentucky 42223.

DIAGNOSTIC RADIOLOGIST AVAILABLE January 1978. Will have completed University of Tennessee residency program including training in angiography, ultrasound and C.T. Seek practice opportunity in Central Texas. Write or call William Healy, M.D., 145 S. Greer, Memphis, Tennessee 38111. Phone 901-323-3737.

GENERAL SURGEON with interest in general practice would like to relocate, large and medium size cities are preferred, small cities may also be considered. Association or solo. Please reply to Ad-730, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FEMALE GYNECOLOGIST. American board. FRCS (Canada) by exam certified by American Society of Cytology. Extensive experience in all aspects of Ob-Gyn and cytology, clinical as well as teaching. Would like to relocate in medium size city, private practice or teaching institution. Please reply to Ad-729, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

CARDIOLOGIST, ABIM, age 30 and completing cardiology fellowship 6/78. Trained in non-invasive (echo, phono, stress testing) and invasive (R and L heart, coronary, Swan-Ganz, pacemakers) techniques. Seeking cardiology group practice or mixed group. Ralph D. Millsaps, M.D., 6902 Williams, Galveston, Texas 77551.

GENERAL SURGEON: U.S. trained 37 years old, FMG board certified in general surgery and colon and rectal surgery seeks relocation to metropolitan or suburban or medium sized town. Prefer association or group but will consider others. Have Texas license and available immediately. Please reply to Ad-733, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN ASSISTANT, university trained, seeks surgery and/or general practice position. Recent graduate of PA program at University of Texas Health Science Center, Dallas (Parkland Memorial Hospital), will take National Boards October 1977. Trained to assist doctor in both office and hospital setting. N. B. Miner, P.A., 4625 Cedar Springs #204, Dallas, Texas 75219.

PEDIATRICIAN, relocating to major city of Texas. Prefer Houston and Dallas area. Available immediately. Prefer group or staff. Have Texas license and completed boards written exam. Call 504-865-7681 or write Ad-734, *Texas Medicine*, 1801 North Lamar Blvd., Austin Texas 78701.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 828-2761, or write P.O. Box 18237, Dallas, Texas 75218.

GROWING NORTHEAST SAN ANTONIO, 55,000 population. No MDs. Five examining rooms, reception, large personal office, carpeted, air conditioned. Rent free details contact W. H. Gibson, 512-656-1166, night 512-651-6449.

AUSTIN—NEW PROFESSIONAL PARK. Int. Med., GP, FP, Peds, OB/GYN, ENT, Radiologist to associate in group setting for solo practice. University town, new hospital. Cannon Professional Park, 1110 William Cannon Drive, Austin, Texas 78745. Telephone 512-451-8484 or 512-444-1954.

DOCTORS WANTED: Physicians to serve North Austin and Round Rock. Will build to suit in prime location at Peyton Gin Shopping Center across from Lanier High School. Locate your office in a rapidly growing population center and at the same time reduce your exorhitant office rent. Phone 836-5472 or 345-1670 or write Cleto Elequin, M.D., 942 Peyton Gin, Austin, Texas 78753.

AVAILABLE OCTOBER 1. 1400 sq. ft., central area of Austin in well known medical center. Present doctor in pediatrics entering military. 10 examining rooms, large enough for two doctors or spacious for solo practice. 50 cents sq. ft. with all utilities paid. Contact: Jim Dodd, 706 West 19th. Austin. 512-478-5351.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251. (Formerly HOME OF THE HOLY INFANCY)

FP OPENING OFFICE. Wants to buy good, used office/medical equipment. Call 817-738-2807.

Advertising Directory

American Physicians Insurance Exchange	66
Arlington Neuropsychiatric Center	114
Beverly Hills Hospital	112
Burroughs Wellcome	90
Comatic Laboratories	3rd Cover
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
Gentec Hospital Supply Company	86
Gulf Coast Emergency Physicians	131
Clifford R. Hostetler, DDS	114
Insurance Corporation of America	27-29
Mead Johnson Laboratories	12
Kelsey-Seybold Clinic	103
Eli Lilly and Company	36
Medical Arts Clinic of Corsicana	113
The Medical Protective Company	103
Park North General Hospital	112
Pennwalt Corp.	96-97
The Prudential Insurance Company of America	9
A. H. Robins Company	17-18
Roche Laboratories	1, 2, 111
Roerig & Co.	68-69, 87
Scott and White Clinic	Back Cover
Shell Oil Co.	131
Smith Kline & French	89
E. R. Squibb & Sons, Inc.	115-118
Starlite Village Hospital	112
Texas Bank and Trust Company	68
Texas Medical Association	
Automobile Leasing Program	71
Memorial Library Fund	107
Texas Continuing Education Directory for Physicians	22
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchings, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	113
Upjohn	95
Warner-Chilcott Laboratories	4-5, 70
Wichita Falls Clinic	68
Physicians' Directory	119-128
Classified Advertising	129-131

Publication of an advertisement in *Texas Medicine* is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

TEXAS
GULF COAST
EMERGENCY PHYSICIANS

Career oriented primary care emergency physicians with additional post graduate training and/or emergency medicine experience. Continuing educational requirements mandatory. Teaching and non-teaching emergency departments available. The only emergency medicine group staffing emergency department-Texas Medical Center. Board eligibility or certification with interest in trauma qualifies for director status. Immediate openings. Guarantee $52,000-$58,000. Fringes: Malpractice, major medical, life, disability income. Houston metropolitan facilities. Excellent schools, churches with a friendly area population. Cultural and educational opportunities. Fresh and salt water. Astrodome, major league sports (football, baseball, ice hockey, golf tournaments, tennis tournaments). Only qualified need apply. Call or Send CV: Gulf Coast Emergency Physicians Association, 12605 East Freeway, Suite 620, Houston, Texas 77015, 713-455-1771.

Staff Physician

Shell Oil Company's Medical Department, at the Deer Park Manufacturing Complex near Houston, has an opportunity for an experienced physician. Will work with one physician and eight registered nurses.

The individual needs to be strongly oriented to clinical, occupational and preventive medicine. Previous industrial experience desirable, but not mandatory.

Salary competitive and commensurate with qualifications. For confidential consideration, please forward résumé to: P. L. Palfreyman, Department A, The Shell Companies, P.O. Box 2463, Houston, Texas 77001.

The Shell Companies
Shell Oil Co., Shell Chemical Co.,
Shell Development Co.,
Shell Pipe Line Corp.

An equal opportunity employer M F

Letters

Schools Need Team Physicians

Dear Ms Baker:

As another football season approaches, we must be aware that many football players in Texas will be injured. Many schools are having difficulty getting team physicians. The ideal situation would be for each football team—from junior high to professional—to have a qualified trainer and team physician. We know that this is not possible yet, but we should keep aiming toward this goal.

The supply of qualified trainers increases each year. Schools that never had a qualified trainer before are now able to get one. This is not the case as far as qualified team physicians are concerned. With the present malpractice situation, many physicians do not want the added exposure of becoming a team physician.

Texas schools desperately need team physicians. The Texas Medical Association's Committee on Athletics and the Texas Society of Athletic Team Physicians are appealing to TMA members to strive to see that each high school has a team physician.

Anyone interested in becoming a team physician is asked to contact:

Ray Covington, MD, Secretary-Treasurer
Texas Society of Athletic Team Physicians
3500 Hillcrest Drive
Waco, TX 76708

or

James W. Shuffield, MD, Chairman,
TMA Committee on Athletics
3650 Laurel
Beaumont, TX 77707

Insect Bite Reports Requested

Dear Ms Baker:

Again this year I am compiling a Biting Insect Summary, and would appreciate any case reports of unusual allergic reactions—especially systemic reactions (sneezing, wheezing, urticaria)—to bites of insects such as mosquitoes, fleas, gnats, kissing bugs, bedbugs, chiggers, black flies, horseflies, sandflies, and deerflies.

I would like physicians to supply me with reports of cases in which patients have had unusual reactions to such insects. Please include the types of reactions (immediate and delayed symptoms), treatment, the age, sex, and race of the patient, the site of the bite(s), the season of the year, and any other associated allergies.

If skin tests and hyposensitization were instituted, I would like the report of both. Please note that it is the biting (not stinging) insects in which I am interested.

If you have found any insect repellent, local treatment, or insecticides to be of value, I would also appreciate a note about it.

Claude A. Frazier, MD,
4-C Doctors Park,
Asheville, NC 28801.

Letters to the Editor are welcome for consideration in this column. The Board of Publication and the editors reserve the right to excerpt letters in accordance with available space and editorial judgment as recommended by consultants. Neither the editors nor TMA shall be, in any manner or to any extent, directly or indirectly, responsible for views expressed by authors in this column.

Editorials

PHYSICIANS SAY LOW PAY, PAPERWORK DISCOURAGE MEDICAID PARTICIPATION

A recent survey conducted by the Texas Medical Association indicated that only 80% of the physicians in private practice in Texas participate in the Medicaid program, and that of those participating, 57% would like their Medicaid patient load to decrease, 34% would like it to remain the same, and only 8% would like it to increase. For the larger specialties, the percentages of physicians participating in Medicaid ranged from 59% of the obstetrician/gynecologists to 78% of the family physicians to 91% of the general surgeons.

Why don't a higher percentage of physicians participate in the program? As the Department of Public Welfare's Blue Ribbon Task Force for the Evaluation of Medicaid pointed out, it is apparent that "willing and cooperative participation of the physician is critical to the success of the Medicaid program for delivery of health services to the needy in this state."

In an attempt to find out why physicians don't participate, a letter was sent to a random sample of TMA members asking for their views on the subject. Following in order of frequency are the reasons that physicians gave: (1) the reimbursement rate is too low; (2) excessive paperwork and delays in payment; (3) dissatisfaction with the limit of two office visits per month without extensive justification; (4) refusal to pay claims; (5) lack of responsibility of Medicaid patients in keeping appointments and following treatment plans; (6) the 90-day filing deadline; (7) resentment of government publishing lists of physicians making certain amounts from Medicaid, particularly when the lists are often inaccurate; (8) the arbitrary changing of procedural codes by the Medicaid contractor; and (9) the dictatorial attitude of government and contractor employees about the program.

So, where do we go from here?

The TMA through its Council on Tax-Financed Health Care Programs is in continuous communication with the Department of Public Welfare and the Medicaid contractor, National Health Insurance Company, Inc. Efforts are under way to raise the level of reimbursement, particularly the alarming disparity between the amounts paid to some rural physicians and some urban physicians. This disparity is a major contributing factor to the scarcity of physicians in many rural areas.

With medical practice expenses rising at such a rapid rate, the malpractice crisis, and other factors familiar to any physician, the low level of reimbursement from Medicaid simply means that physicians and their private patients are subsidizing the Medicaid program. Unfortunately, our public officials continue to raise citizen expectations by promising health care, but are unwilling to allocate sufficient resources to make that promise a reality. The burden then falls to the physician to make good on the promise.

This burden is heaviest for physicians in areas which have higher percentages of people eligible for Medicaid. A cooperative spirit must exist among all physicians to prevent the burden from falling on a few. If more physicians chose to participate, each physician's percentage of Medicaid patients could be reduced.

Billing systems are becoming more sophisticated, and new methods of billing can reduce the

required paperwork. Use of procedural coding systems can also contribute to a more effective management of the paper and payment mechanism.

As physicians we must sensitize the public to the realities of the Medicaid program. We know what the problems are. The DPW Medicaid Task Force was interesting to observe. Most people on the committee were amazed as they learned more and more about the limitations on payment, second visits, the paperwork, and the maze of rules and regulations from DPW, the federal government, and the Medicaid contractor.

As physicians we have a responsibility to inform the public about the inadequacies of the program, not for ourselves, but for our patients.

Mario E. Ramirez, MD, Rio Grande City, Chairman,
TMA Committee on Tax-Financed Health Care.

MODERN MEDICAL CARE MUST INCLUDE ACCESS TO COMPUTED TOMOGRAPHY

"Before the federal government and other third party payors voluntarily took on the responsibility of paying for medical care, government representatives were impatient with the time interval between the advent of a useful medical development and the time it took to make it available to all the people.

"Government representatives now hold back extremely useful medical developments because cost has now become more important than offering all the people the 'highest quality of medical care.' The certificate of need and the refusal and/or threatened refusal of Blue Cross-Blue Shield to pay for CT body scanning is the most recent flagrant example of this thinking."

So say the members of the Texas Medical Association's Ad Hoc Committee on CT Scanners in a statement adopted July 10 by the Executive Board and forwarded to the Health Facilities Planning Commission and HSAs.

The committee, chaired by J. E. Miller, MD, of Dallas, was appointed to study the issues surrounding the location, utilization, and supervision of CT scanners, and to prepare recommendations to government bodies that establish guidelines for purchase and use of such equipment. In this way, TMA may have a voice in designing regulations that will affect the level of care available to patients.

Other committee members were Edwin R. Buster, III, MD, Austin; Marvin C. Overton, III, MD, Fort Worth; and John R. Derrick, MD, Galveston. Details of the committtee's recommendations may be found on page —.

"Access of the public to computed tomography is essential," the statement continued. "Computed tomography is a proven radiologic modality which provides valuable clinical information in the early detection, differentiation, and demarcation of disease in the head and body. Abundant documentation of its safety and diagnostic efficacy has been presented in the scientific literature. It is particularly helpful in solving problems where there is conflicting information from other radiological or laboratory studies. It will frequently replace other examinations, many of which carry greater danger, discomfort and expense.

"If the public is to receive the benefit of modern medical care, as practiced in the last quarter of the 20th century, computed tomography must be readily available to all."

Oct77

TexasMedicine

Too much sleep, but not enough

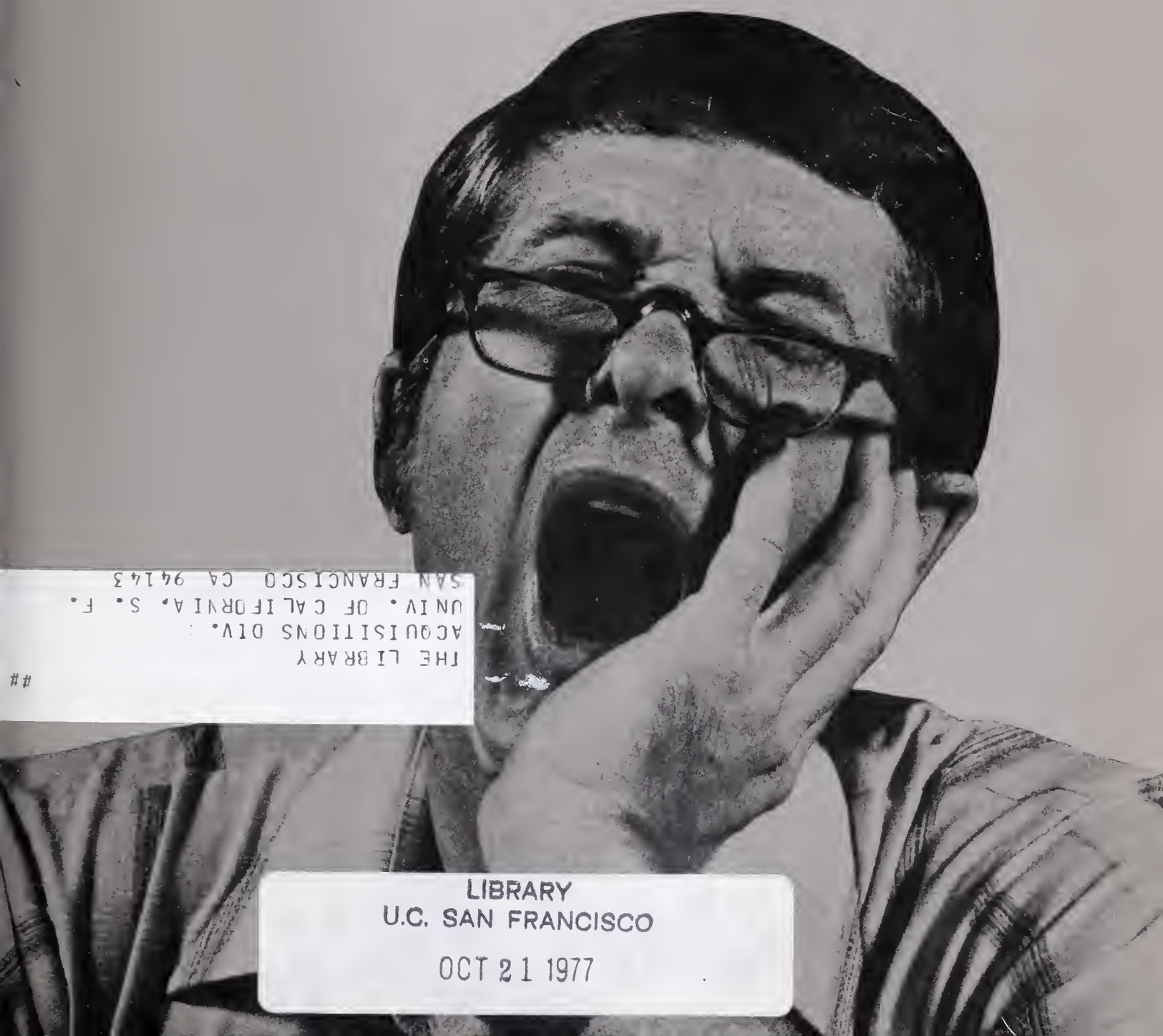
Assessing the suicide rate

Right to treatment

Infant botulism case in Texas

Natural Death Act

Texas' entering medical students



THE LIBRARY
ACQUISITIONS DIV.
UNIV. OF CALIFORNIA, S. F.
SAN FRANCISCO CA 94143
##

LIBRARY
U.C. SAN FRANCISCO
OCT 21 1977

Torbett-Hutchings-Smith Memorial Hospital
and Torbett-Hutchings-Smith Clinic

322 Coleman Street
Post Office Box 60

Marlin, Texas 76661

Telephone: 883-3561

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.*
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

TRAUMATIC AND ORTHOPEDIC SURGERY
D. R. Swetland, M.D., F.A.C.S.

ALLERGY
S. W. Hughes, M.D.

CARDIOLOGY
W. F. McKinley, Jr., M.D.

OBSTETRICS AND PEDIATRICS
William Pickvance, M.D.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
Ronald E. Henderson, Jr., M.D.
David M. McTaggart, M.D.
S. M. Bunn, Jr., M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.*
Howard L. Smith, M.D., F.A.C.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

NEUROSURGERY
Harry W. Slade, M.D., F.A.C.S.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Associate Administrator:
Larry Parsons

Director-Coordinator, Nursing Service:
Vera Bee, R.N.

Director of Patient Care:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

*Expired May 17th, 1977.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street

DALLAS, TEXAS 75211

Telephone 823-4151

INTERNAL MEDICINE
John B. Allen, M.D., D.A.B.I.M.
Morris E. Magers, M.D., D.A.B.I.M.
Channing Woods, M.D.
Richard C. Stone, M.D., Gastroenterology
Landon W. Stewart, M.D., D.A.B.I.M.
Cloyce L. Stetson, Jr., M.D., D.A.B.I.M.
David S. Sowell, III, M.D., D.A.B.I.M., Cardiology
Don E. Cheatum, M.D., D.A.B.I.M., and D.A.B. Rhu, F.A.C.P., Rheumatology
W. Mark Armstrong, M.D., D.A.B.I.M.
Sam W. Waters, M.D.
George E. Thomas, M.D., D.A.B.I.M.
Steven P. Bowers, M.D., D.A.B.I.M.
Carlos M. Kier, M.D., D.A.B.I.M., Rheumatology

ORTHOPEDIC SURGERY
George S. Phalen, M.D., D.A.B.O.S., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
John B. Miller, III, M.D., D.A.B.O.G.
Vernie D. Bodden, M.D.

PEDIATRICS
Halcuit Moore, M.D., D.A.B.P., F.A.A.P.
P. E. Luecke, Jr., M.D., D.A.B.P., F.A.A.P.
Larry Gray, M.D., D.A.B.P., F.A.A.P.

GENERAL SURGERY
George P. Fosmire, M.D., D.A.B.S., F.A.C.S.
Miller S. Bell, M.D., D.A.B.S., F.A.C.S.

UROLOGY
Harry M. Spence, M.D., D.A.B.U., F.A.C.S.
William H. Hoffman, M.D., D.A.B.U., F.A.C.S.
Richard B. Dulany, M.D., D.A.B.U., F.A.C.S.

RADIOLOGY
Raymond W. Burford, M.D., D.A.B.R.
Joe B. Caldwell, M.D., D.A.B.R.
James B. Evans, M.D., D.A.B.R.

DERMATOLOGY
William N. New, M.D., F.A.A.D., F.A.C.P.

OTOLARYNGOLOGY AND OTOLOGIC SURGERY
D. W. Shuster, M.D., D.A.B.O.

OPHTHALMOLOGY
R. M. Burnside, M.D., D.A.B.O.
James M. Copps, M.D., D.A.B.O.

DENTISTRY AND DENTAL SURGERY
J. Boyd Hollabaugh, D.D.S.
William F. Walton, D.D.S.
Larry L. Cowsert, D.D.S.

ADMINISTRATION
C. H. Rosamond, Administrator
Jack Green, Associate Administrator

DIRECTOR OF NURSING SERVICE
Miss Billye J. Norris, R.N.

INACTIVE STATUS
George M. Underwood, M.D., D.A.B.I.M., F.A.C.P., Gastroenterology
William H. Potts, M.D., F.A.C.P., Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics and Gynecology
Adam D. Green, M.D., Surgery
B. Celia Slaughter, M.D., D.A.B.P., F.A.A.P.
John B. Bourland, M.D., D.A.B.O.G.

Her next attack of cystitis* may require

The Bactrim™ 3-system counterattack

*Due to susceptible organisms

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

ROCHE

Please see reverse side for summary of product information.

ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register, 37*:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older:

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Texas Medicine
VOL 73 OCTOBER 1977

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION
Don G. Harrel, MD, Dallas
Chairman
Sam N. Key, MD, Austin
Vice-Chairman
Merle W. Delmer, MD, San Antonio,
Secretary
Walter A. Brooks, MD, Quanah
R. Harvey Bell, MD, Palestine
C. W. Yates, MD, Rosenberg
Paul R. Meyer, MD, Port Arthur

TMA OFFICERS
John M. Smith, Jr., MD, San Antonio
President
A. J. Gill, MD, Dallas
Vice-President
Mylie E. Durham, Jr., MD, Houston
President-Elect
James G. Morris, MD, Lubbock
Secretary
Ben R. Keller, Jr., MD, Arlington
Treasurer
C. Lincoln Williston, Austin
Executive Director

EDITORIAL STAFF
1905 N Lamar Blvd, Austin 78705
Telephone: 512-477-6704
Marilyn Baker, Executive Editor
Rae Vajgert, Assistant Executive
Editor
Elise David, Assistant Editor
Donna Billie, Editorial Assistant
Patty Mullins, Secretary

ADVERTISING STAFF
1801 N Lamar Blvd, Austin 78701
Jon R. Hornaday, Advertising Director
Anne Shelnutt, Advertising Manager

SCIENTIFIC PUBLICATION
COMMITTEE
C. W. Daeschner, MD, Galveston
Chairman
Robert Askew, MD, Austin
Vice-Chairman
Ernest C. Butler, MD, Austin
Jesse D. Cone, MD, Odessa
Richard D. Cunningham, MD, Temple
George A. Gates, MD, San Antonio
Tracy R. Gordy, MD, Austin
David P. Green, MD, San Antonio
R. Maurice Hood, MD, Austin
Paxton H. Howard, Jr., MD, Temple
Daniel E. Jenkins, Jr, MD, Houston
Joseph Lancaster, MD, Austin
Francis E. McIntyre, MD, Austin
Paul C. Peters, MD, Dallas
H. Irving Schweppe, Jr., MD, Houston
Karen W. Teel, MD, Austin
Theodore P. Votteler, MD, Dallas

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104
SUBSCRIPTIONS
1801 N Lamar Blvd, Austin 78701
c/o Ray Riggs, Business Manager
$4 per year for members; $8 for non-members; $14 for foreign; $6 for libraries, hospitals, and universities; $4 for medical students. Single copy: $1.25.
CHANGE OF ADDRESS
1801 N Lamar Blvd, Austin 78701
c/o Edward R. Bierschenk, Membership Director

Copyright 1977 by the Texas Medical Association. Owned and issued monthly by the Association.

Second Class Postage paid at Austin, Texas, and additional mailing office, under act of March 3, 1879. Publication number 796660.

Postmaster: Please direct correspondence to Marilyn Baker, Executive Editor, 1905 N Lamar Blvd, Austin, TX 78705.

Contents

Scientific Articles

49 Disturbed sleep as a function of sleep apnea: too much sleep but not enough Ismet Karacan, MD; Catesby Ware, PhD; Constance A. Moore, BA; Baris Dervent, MD; Robert L. Williams, MD

57 Suicide and the family physician: clinical assessment of suicide risk Thomas Ray Mareth, MD

68 Anxiety and symptom evaluation Jane Preston, MD

73 Lithium Cal K. Cohn, MD

76 Right to treatment: issues and implications Webster Blocker, MD; Carla Dowben, JD

85 Case of infant botulism in Texas Betty J. Edmond, MD; Fernando A. Guerra, MD; Jerry Blake, MD; Sharon Hempler, MD

87 Comment on infant botulism Quellin T. Box, MD

89 New instrument: a frozen section orientation block J. Thom Love, Jr, MD

Features

91 The Texas Natural Death Act

96 The British Health Care System

Editorials

137 Labeling prescription drugs usually is best for patients

138 Britain's experience with NHI offers lesson for Americans Joseph M. Merrill, MD

News

7 TMA House of Delegates will consider reorganization report

10 Board of Medical Examiners holds hearing on laboratory billing

13 Medical schools enroll 1013 students

13 TMA president criticizes federal report

14 AMA sets up foreign medical graduate office

15 Texas Department of Health conducts pilot nursing home hearings

21 Board of Human Resources raises Medicaid reimbursement

22 National Cancer Institute releases cancer report

24 TMA House of Delegates will meet in Austin Nov 12 and 13

25 TMA coordinates Physician's Placement Service

Departments

27 Capital Comments

32 Meetings

41 Continuing Education

106 Medical Newsmakers

108 Medicine and the Law

112 Medicine and Literature

114 Information for Authors

115 Deaths

On The Cover

The patient who sleeps too much and falls asleep when he shouldn't may appear to be normal, and customary tests and examinations may contribute nothing in the way of helpful diagnostic information. Physicians who see such cases may be interested in the article on disturbed sleep as a function of sleep apnea; it begins on page 49.

consider the effect on coexisting diabetes when you prescribe a vasodilator*

(POSTERIOR VIEW OF PANCREAS)

no interference in the management of the diabetic patient has been reported with

VASODILAN®
(ISOXSUPRINE HCl)

the compatible vasodilator TABLETS, 20 mg.

*Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg.(1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

Mead Johnson LABORATORIES

© 1977, MEAD JOHNSON & COMPANY, EVANSVILLE, INDIANA 47721 U.S.A. MJLS-4117R1

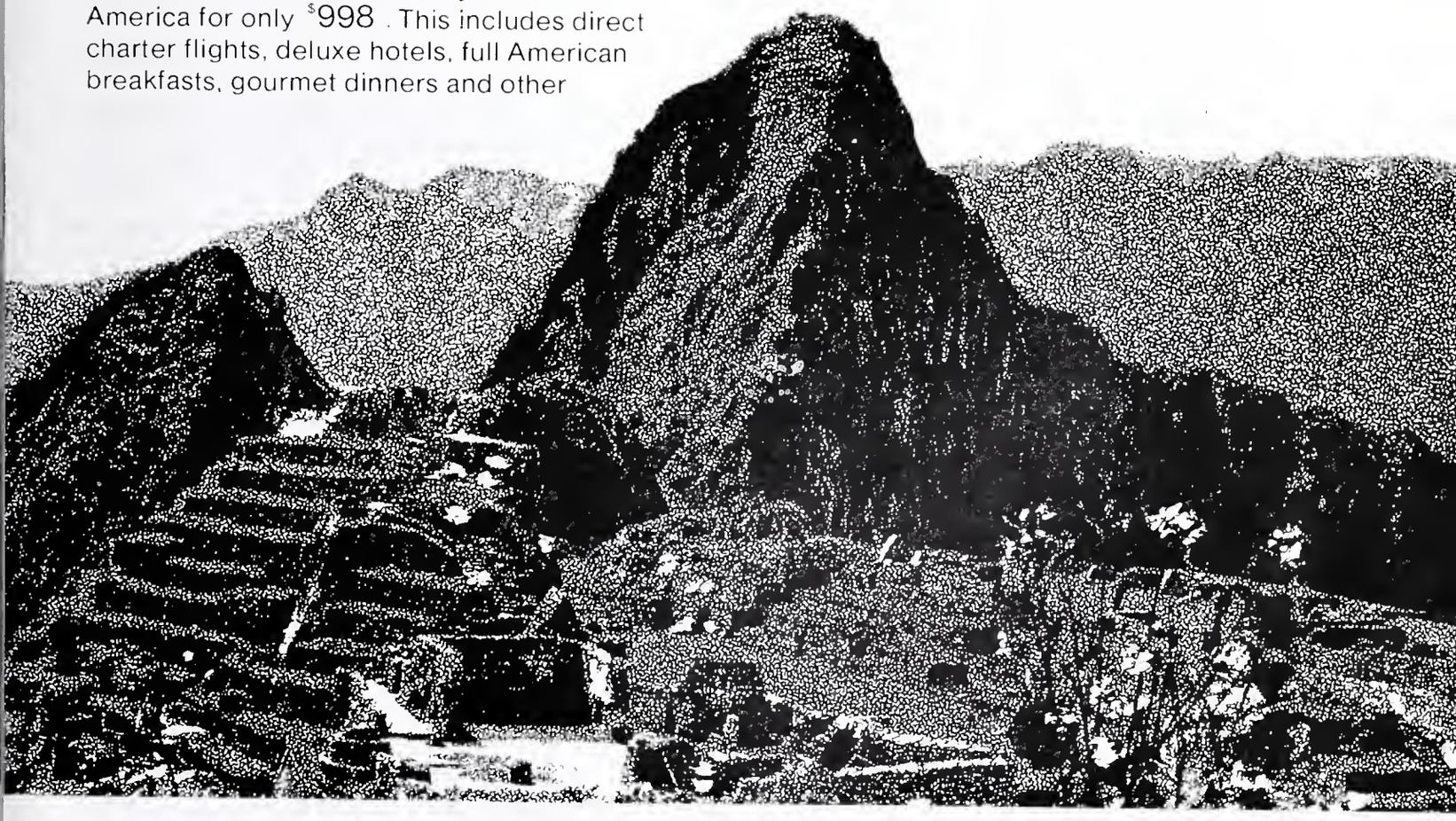
South American Adventure®

Discover incredible Machu Picchu, Lost City of the Incas. Stroll through two-mile-high Cuzco. Enjoy cosmopolitan Lima and colonial Quito. Watch exciting bullfights. Visit colorful Indian markets. Explore Darwin's unique Galapagos Islands. And tip-toe on the Equator.

Experience nine sun-filled days in South America for only $998. This includes direct charter flights, deluxe hotels, full American breakfasts, gourmet dinners and other special conveniences of deluxe travel at charter-cost savings

Join us for a South American summer in Peru and Ecuador. Send your deposit today.

Departing Dallas-Fort Worth and Houston on February 10, 1978 and returning on February 19.



Send to: TMA South American Adventure
1801 North Lamar Blvd., Austin, Texas 78701

Enclosed is my check for $ _____ ($100 per person) as deposit.

Names _____
Address _____
City _____ State _____ Zip _____
Area Code _____ Phone _____

A Non-Regimented INTRAV Deluxe Adventure

News in brief

TMA reorganization

The TMA Executive Board has adopted a report of the Ad Hoc Committee to Study the Association's Organizational Structure and Function. The TMA House of Delegates will consider the report during the TMA House of Delegates session in November . . . 7

Clinical laboratory billing

The Texas State Board of Medical Examiners held a public hearing on the new clinical laboratory billing law Sept 25 in Austin. The law, passed by the 65th Texas Legislature and signed by Gov Dolph Briscoe, will require physicians and other professionals who bill patients for tests which are performed by laboratories outside their offices to provide patients with the name of the laboratory and the amount paid for the tests . . . 10

Medical school enrollment

Texas medical schools opened doors this fall to 1013 freshmen medical students. The enrollment is an increase from last year's entering class of 932 students . . . 13

Medicare reimbursement increased

The Texas Board of Human Resources has voted to raise the Medicaid reimbursement to physicians to 100% of the Medicare reasonable charge profiles. Profile updating began in August, but profiles will be updated and increased payments should begin in October . . . 21

Cancer report

The cancer patients are not surviving much longer today than they did 25 years ago, according to the latest survey by the National Cancer Institute which compared mortality data from 1950-1959, 1960-1965, and 1966-1973. Of the 10 most common cancers, only bladder and prostatic have seen more than a 5% increase in the percentage of white patients surviving five years. For blacks, breast, bladder, prostate, and rectal cancer all showed more than a 5% gain in patient five-year survival . . . 22

News in detail

TMA House of Delegates will consider reorganization report

The TMA Executive Board has adopted a report of the Ad Hoc Committee to Study the Association's Organizational Structure and Function.

The TMA House of Delegates will consider the report during the TMA House of Delegates session in November.

All TMA members are invited to an open hearing on the report at 8 pm, Friday Nov 11, in the Austin Hilton Inn.

A special reference committee will conduct a hearing on the report and required constitutional amendments, Saturday, Nov 12.

Recommendations

Major recommendations of the report include establishment of a single Board. The Executive Board recommends that the functions of the Executive Board and the Board of Trustees be combined, that the new Board be composed of 13 voting and 2 non-voting ex officio members; that the at large members be elected by an at large election procedure without slotting and that the terms and tenure of office be shortened.

The report also recommends a change in the council structure to organize along functional lines.

The Executive Board recommends that the council structure be realigned and reorganized following the 1978 Annual Session into six major areas: Socioeconomics, Medical Education, Health Affairs, Health Facilities, Legislation, and Constitution and Bylaws.

Realignment of present committees by new councils and subsequent designation of a new committee structure is recommended.

Transitional realignment of present committees under the new councils is recommended following the 1978 Annual Session; assessment of the need for committees by the individual councils; and, during 1978-1979, designation of new committees as recommended by the councils and approved by the new Board.

The Executive Board recommends the development of a pool of trained physician and staff negotiators and outlines the mechanism for authorization of negotiations and policy guidance during the course of negotiations.

The Executive Board also recommends that the staff support provided the volunteer physicians be increased, and calls for the study of the feasibility of an inhouse legal department, and endorsement of the principle of a full-time physician chief executive officer.

Definitions of appropriate relationships with medical specialty societies, Texas Medical Foundation, Texas institute for Medical Assessment and other organizations are recommended by the board. Liaison relationships within and without the Association also are defined by objective and by council.

The Executive Board recommends an intensified recruitment for resident physicians and medical students and staff assistance to county medical societies for membership retention.

Recommended also are enforcement of the policy on fiscal notes for all proposals which require funds or staff, program and zero-based budgeting, allocation of resources by priority, and long range fiscal planning by the new Board.

In the report, the Executive Board recommends the approval of an incremental scheduled dues increase.

The board recommends an annual dues increase of 10% of the current 1977 dues base be approved for a three year period to offset inflation and cost of living increases as well as to permit limited program and staff expansion.

Background

The Committee to Study the Association's Organizational Structure and Function met in February, March, April, May, and twice in July to develop the report. The study encompassed approximately 700 hours of professional time and an inestimable number of hours by staff.

The committee interviewed the chairman of the Board of Trustees, the president, the president-elect, and the TMA executive staff. Meetings also were held with the council chairmen and their staff to learn of present activities and to receive suggestions for change. A survey of the House of Delegates provided added scope.

Tentative conclusions were presented to the Executive Board and to council representatives as a final step before preparation of the final report.

Multiple analyses were prepared as a part of the study: projections on the future environment, a conceptual model of TMA, the planning process, definition of the problems facing medicine, organization weaknesses, and principles for a strong organization. The study also was assisted by staff reports and projections on numerous specific subjects within current TMA operations. These included reports on the organizational structures of other large state medical associations and the AMA, membership, legal-legislative-lobbying alternatives, finances, facilities and staff resources.

Committee members

In addressing this broad responsibility, the TMA Executive Board appointed the Ad Hoc Committee to Study the Association's Organizational Structure and Function. Members of the committee were Joseph T. Painter, MD, chairman, Charles Max Cole, MD, Sheridan S. Evans, MD, Ben R. Keller, Jr, MD, Sam N. Key, Jr, MD, A. Rex Kirkley, MD, and Travis Smith, MD. To conduct the study, the committee established certain organizational principles, defined the problems facing the Association, identified the functions which the Association should perform to meet present day problems, grouped those functions into structural areas, and compared the needed organizational units with present Association structure.

The committee's goal was to present the best plan for a strong effective Association to represent the practicing physicians in Texas in today's world unencumbered by tradition. No area of the Association was immune from study; none from recommendations for change. The changes recommended in the report require extensive amendment to the TMA Constitution and Bylaws.

To facilitate consideration of recommendations approved by the Executive Board, the Council on Constitution and Bylaws has prepared specific language changes for all recommendations requiring constitutional change.

The report of the Executive Board, and the accompanying Constitutional language changes, are included in the Delegates Handbook for consideration at the Interim Session of the House of Delegates in November.

Preparation of amendments to the Bylaws would follow any action taken by the House of Delegates and would await consideration at the 1978 Annual Session.

The implications of action taken by the House of Delegates would be to initiate an orderly change in organization following the 1978 Annual Session. According to the Executive Board, decisions reached in November 1977 will be critical as they will necessitate extensive planning by the president-elect, Board of Trustees, and staff to effect an orderly transition during and following the 1978 Annual Session. Implementation of the Executive Board's recommendations would be completed by 1979.

Congress considers federal health legislation

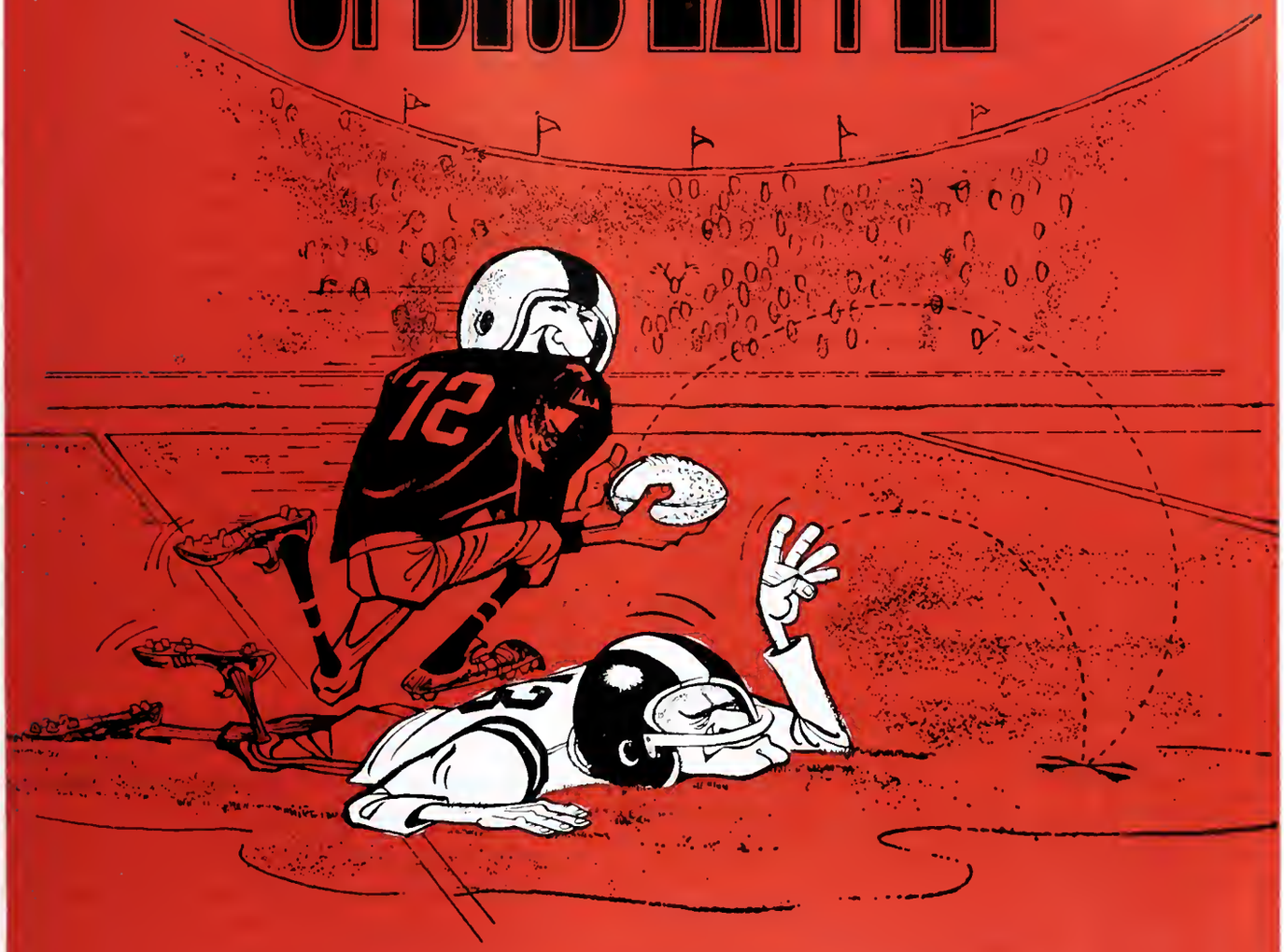
The Congress is considering a large amount of federal health legislation this fall.

The legislation listed by *American Medical News* includes the Carter Administration's hospital cost containment plan; the Health, Education, and Welfare Dept appropriation, which has been stalled over the abortion issue; new federal regulations for clinical laboratories; Medicare-Medicaid fraud and abuse; federal aid for rural health clinic physician extenders; the Administration's plan for expanding the child health program; and an omnibus drug bill making many changes in Food and Drug Administration operations and regulations, including new labeling language.

House hearings were scheduled by Rep Paul Rogers (D,Fla) to air medical school complaints to his health subcommittee on the medical manpower bill's provisions requiring acceptance of foreign medical graduates. Some prestigious schools are threatening to drop millions of dollars in federal aid to avoid complying with what they regard as unwarranted federal meddling in their admissions processes.

President Carter and HEW Secretary Joseph Califano have warned Congress that a clamp on hospital spending is a prerequisite of a national health insurance proposal. The Administration is seeking a flat 9% "cap" on hospital revenue increases yearly, in addition to a $1.5-billion national limit on capital expenditures.

UPSETS HAPPEN



BUT YOU CAN PROTECT YOURSELF FROM THE UNEXPECTED WITH THE TEXAS MEDICAL ASSOCIATIONS GROUP PLANS.

LIFE INSURANCE • DISABILITY INCOME

OFFICE OVERHEAD • PERSONAL ACCIDENT

MAJOR MEDICAL

Write for a Brochure and Application Today.

TEXAS MEDICAL ASSOCIATION

1801 N. LAMAR BLVD.
AUSTIN, TEXAS 78701
Ph. 512/476-6551

Underwritten By

Prudential

Board of Medical Examiners holds hearing on laboratory billing

The Texas State Board of Medical Examiners held a public hearing on the new clinical laboratory billing law Sept 25 in Austin.

The Board heard testimony on factors possibly affecting implementation of the law.

The law, passed by the 65th Texas Legislature and signed by Gov Dolph Briscoe, will require physicians and other professionals who bill patients for tests which are performed by laboratories outside their offices to provide patients with the name of the laboratory and the amount paid for the tests.

Following are the most frequently asked questions concerning the clinical laboratory billing law. The questions and answers were prepared by the law firm of Brown, Maroney, Rose, Baker and Barber, TMA General Counsel.

There are several types of ownership and operations of laboratories as well as methods of billing being used in practices.

A variance in facts of one situation may alter the compliance or noncompliance with the law, and therefore all facts should be examined in light of the statute.

The questions and answers are merely advisory and do not represent any official position of the Board of Medical Examiners.

1. What does the bill say?

The bill says that no person licensed in Texas to practice medicine, dentistry, podiatry, veterinary medicine or chiropractic shall agree with any clinical, bio-analytical or hospital laboratory, wherever located (in this state or not), to make payments to such laboratory for individual tests, combination of tests, or test series for patients unless such person discloses on the bill or statement to the patient or third party payors the name and address of such laboratory and the net amount or amounts paid to or to be paid to such laboratory for such tests.

2. When will the bill go into effect?

It became effective June 15, 1977.

3. Who is affected by the bill?

All persons licensed in Texas to practice medicine, dentistry, podiatry, veterinary medicine or chiropractic.

4. Who is responsible for enforcement?

The board or agency responsible for licensing and regulation of persons practicing medicine, dentistry, podiatry, veterinary medicine and chiropractic. The Texas State Board of Medical Examiners are responsible for enforcement for physicians.

5. What enforcement powers can the Texas State Board of Medical Examiners use?

The Board of Medical Examiners under the Medical Practice Act could refuse to renew a license, warn, reprimand, cancel, revoke or suspend a license. In addition, the Board has the power to probate any action so long as the practitioner conforms to such orders and rules as the Board may set out as the terms of probation.

6. Will the Board of Medical Examiners issue any rules, regulations or guidelines for HB 1309?

The Board held a public hearing as to proposed rules or regulations Sept 25 in Austin. Until the Board takes further action, practitioners should make reasonable good faith efforts to comply with the law.

7. Whose decision was it to support this bill from the standpoint of the TMA?

The final decision was made by the TMA House of Delegates in May of 1977.

8. How many other states have this bill and what other medical organizations have supported this type legislation?

The states of Connecticut, Delaware, Illinois, Maryland, Michigan, New Jersey, and Texas have statutes. Several other states cover the subject by rules and regulations of either the clinical laboratory licensing law or medical practice act. The AMA has promulgated a model bill on the subject. (The Texas law is almost identical to the AMA model bill.)

9. What have been the results in those states?

There appears not to have been any opposition to passage of such bills, and no complaints to speak of have been received by the medical societies of those states or the enforcement agencies.

10. Is the physician not entitled to a fee for drawing blood, and other services in connection with a test?

A physician is entitled to fair compensation for his professional services such as drawing blood, urine, administrative handling of samples, interpretation of results, notification, examination and other matters attendant to diagnoses, treatment of any disease or disorder, mental or physical, or any physical deformity or injury, by any

system or method, or the effecting of a cure thereof. The law does not prohibit any so-called "mark-up" commission or profit on services rendered by others (although ethics would). However, the physician must disclose to the patient the net amount charged him by the lab for such test.

11. Does the law apply to a physician who has his own laboratory (regardless of its physical location)?

No, as long as it is the physician's and not incorporated as a separate entity.

12. Does the bill apply to x-rays?

No.

13. What if several physicians own a laboratory together as a corporation?

Because a corporation is a separate entity the bill would apply to the physicians.

14. What if several physicians own a laboratory together as a cooperative effort or partnership?

While the Board of Medical Examiners will need to look at this type operation, it would appear at this time the proper interpretation would be that this lab is an extension of the physician's own office and would not apply.

15. Does the name, location and net amount paid for tests by such lab have to be written on every bill?

It would appear that compliance with the law would indicate that the information must be communicated on a bill or statement at the time the original bill or statement is prepared for a patient, or given to the patient, and would not need to be repeated on subsequent billings relating to charges for such test.

16. Would providing a copy of the actual laboratory report with the test and amounts charged suffice?

A bill or statement is the sum total of all information, and no requirement seems indicated that all information must be on one instrument or paper. If the report had the name, address of the lab, and charges, it would appear that giving the patient a copy of same in some manner, either at the time the patient is in the office or in the envelope with the bill or statement would comply with the law.

17. What about a case where a physician bills the patient immediately, but the laboratory does not bill the physician until later?

The act speaks to amounts paid or to be paid. In view of this, the physician should disclose the net amounts he or she has agreed to pay for such test.

18. What if the bill is paid in cash?

The bill does not speak as to the type of payment, either cash or subsequent payments. Therefore, when a bill or statement is presented to the patient, a disclosure should be made, regardless of method of payment.

19. Does each test have to be itemized?

The law states that only net amounts paid are required to be disclosed; therefore, the total net amount for tests or combination of tests would appear to be satisfactory.

20. What about Medicare, Blue Cross and other insurers?

HB 1309 is a state law. On Medicare forms, Item 13 already requires a statement of where the work was performed. Item 7 requires you to list each test or profile, the place of service, the procedure code and charges. There is, at this time, no indication that Medicare will change its procedure. However, if such is done, Medicare will notify physicians. As to other insurance companies, if you accept the responsibility of billing the carrier, you must disclose the information. If the carrier has no place on its forms you may add to same or enclose separate information with respect to same. If you bill the patient in his insurance claim, your responsibility is solely to the patient.

21. What does name and address mean?

The specific requirement of street address is not delineated. Therefore, XYZ Lab, Medical City, Texas, would appear to be sufficient.

22. What does "net amount" mean?

The act is not specific, and more than one approach may be used. The only element that must be remembered is to disclose the net amounts paid. An example that would comply would be to place at the bottom of the statement, either typed or by rubber stamp, "A portion or all of the lab work prescribed for you was performed by XYZ Labs of Medical City, Texas, and they were paid $_____ for their testing portion only." It should be remembered that the law does not prohibit you from billing the patient exactly the same fees as currently being charged or the manner currently being used. It only requires that disclosure be made of the amount you paid for the work.

chewable!
chewable!

chewable!
chewable!

announcing

ISORDIL® CHEWABLE TABLETS 10 mg
(ISOSORBIDE DINITRATE)

for those angina* patients for whom you prefer a chewable isosorbide dinitrate. This higher strength chewable tablet makes increased dosage practical, and the tablet is scored for a lower starting dose and titration of dosage.

***Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:
"Probably" effective: When taken by the chewable route, Isordil Chewable Tablets are indicated for the treatment of acute anginal attacks and for prophylaxis in situations likely to provoke such attacks.
Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.
Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.
Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.
Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

Consult direction circular before prescribing.

May we send you reprints, detailed information and/or professional samples?

IVES LABORATORIES INC. Ives®
685 Third Avenue
New York, New York 10017
DEDICATED TO IMPROVING THE QUALITY OF LIFE THROUGH MEDICINE®

It should also be noted that a separate piece of paper with the above information enclosed with a bill or statement would appear to comply with the law. A copy of the statement you received by the lab would also appear to meet the requirements if the name, location of lab and charge to you appears on same.

23. Does the bill require the physicians to absorb the expenses of collecting, separating and preparing specimens to be sent to laboratories and the expense of billing and collecting for such charges as well as the losses that will be absorbed by uncollected items?

No. The physician is entitled to his professional fee in an adequate amount, and all of the above charges are within such services. He should be paid for same at an adequate rate.

24. What should I do now while awaiting further interpretation of the bill?

The physician can consult his or her own attorney or make a good faith effort to comply with the law until such time as the Texas State Board of Medical Examiners has acted upon this matter. The actions of the Board will have input from the TMA and the results will be communicated to the members of the Texas Medical Association.

Medical schools enroll 1013 freshmen students

Texas medical schools opened doors this fall to 1013 freshmen medical students.

This year, one new Texas Medical school accepted its charter class. The Texas A&M University College of Medicine enrolled 32 freshmen medical students.

Students enrolled at other schools include Baylor College of Medicine, Houston, 168; Texas College of Osteopathic Medicine, Ft Worth, 76; Texas Tech University School of Medicine, Lubbock, 40; Southwestern Medical School, University of Texas Health Science Center, Dallas, 206; University of Texas Medical Branch, Galveston, 203; Medical School, University of Texas Health Science Center, Houston, 151; and Medical School, University of Texas Health Science Center, San Antonio, 137.

Texas Medical Association president criticizes federal report

Data recently released by a Congressional committee on the amount of surgery performed on Texas Medicaid patients is grossly inaccurate, says the president of the Texas Medical Association.

John M. Smith, Jr, MD, president of the Texas Medical Association, said the report of the House Subcommittee on Oversight and Investigation created a major statistical mistake in reporting surgical figures for the Medicaid program in Texas.

"The report states that the surgery rate in Texas is 91,430 procedures per 100,000 Medicaid recipients," the San Antonio doctor said. "That statistic isn't even close to being accurate, and exaggerates the actual Texas experience by more than nine times." Officials of the Texas Department of Human Resources, formerly the Department of Public Welfare, have informed TMA that the actual rate of surgery in Texas is 9,932 per 100,000.

"We share the concern of the human resources department officials that the misuse or misunderstanding of the Texas data by the subcommittee will cause unfair criticism and imply abuse of the Medicaid program in Texas," Dr Smith said.

The complete foul-up of the Texas data by Congressman John Moss (D-Calif) and his subcommittee, combined with reports that information from other states in its study is equally distorted, should cause any reasonable person to question the validity of the subcommittee's entire report, Dr Smith stated.

The subcommittee report on people receiving Medicaid benefits—the poor and near poor—claimed that they have surgery performed at twice the rate of the general population.

Texas Department of Health will conduct influenza surveillance program

The Texas Department of Health will conduct and coordinate a program of influenza surveillance during this year's respiratory disease season.

Unlike last year, no influenza vaccine will be provided by federal or state governments and

no influenza immunizations will be offered in state-operated public health clinics.

However, this policy should not detract from the importance of an effective influenza surveillance program, says the Texas Department of Health.

The 1977-78 Texas Influenza Surveillance Program will be patterned after the 1976-77 program. Influenza morbidity data will be obtained weekly by telephone from a group of cooperating primary care physicians. At the request of the Bureau of Communicable Disease Services, the Texas Department of Health, the public health regional directors, and health department directors in the larger cities of Texas are recruiting these physicians within their areas. This data and information, received through normal reporting channels, will be collected and analyzed. Additional reporting is urgently solicited from any physician who notes an unusual clustering of apparent influenza cases.

Specimens, including a throat washing and paired acute and convalescent serum samples, may be requested for laboratory confirmation. Should conditions warrant, special epidemiological followup of cases may be initiated.

During last year's surveillance program, through the cooperation of a private physician in San Antonio, the San Antonio Metropolitan Health District, Air Force public health units, the national Center for Disease Control, and the Texas Department of Health, a new strain of influenza, designated A/Texas/1/77, was isolated and characterized. Through these efforts it was determined that this strain did not need to be included in the vaccine formulation for this year because there was reason to believe that A/Victoria/3/75 antigen provided sufficient cross protection.

American Medical Association sets up foreign medical graduate office

A new office of foreign medical graduate affairs has been established at the American Medical Association.

Henry Mason has been appointed to head the office, under the AMA's Dept of Housestaff Affairs. Main goals of the new office will be to provide assistance to foreign physicians in the United States in getting education and employment, Mason said.

Mason, who formerly conducted research for the Council on Medical Education, has published six original studies on foreign medical graduates and foreign medical education.

HEW Secretary suspends general marketing of phenformin

On July 25, 1977 the Secretary of Health, Education, and Welfare suspended the New Drug Applications for phenformin and ordered an end to general marketing within 90 days (Oct 23, 1977), according to the August 1977 issue of the *FDA Drug Bulletin.*

This action was taken because of the unacceptably high risk of lactic acidosis associated with the use of this drug. Phenformin was being used in the United States by an estimated 336,000 patients. It is marketed by CIBA-Geigy as DBI and DBI-TD and as Meltrol by USV Pharmaceuticals.

The Secretary's decision was based on an extensive FDA review of the risks of phenformin before its Endocrinology and Metabolism Advisory Committee in October 1976 and at an open hearing on May 13, 1977.

Data from a variety of sources show that phenformin-associated lactic acidosis occurs at a much higher incidence than is generally appreciated. The estimated incidence is .25 to 4 cases per 1,000 users per year, and death occurs in approximately 50% of the cases. Because there were approximately 336,000 patients on phenformin in the United States, this amounts to roughly 50 to 700 deaths per year.

A special issue of the *FDA Drug Bulletin* August 1977 was sent to all health professionals offering guidance for managing patients during the 90-day transition period.

New partial disability plan available under TMA insurance program

A new long term benefits plan for partial disability will be available Nov 1 on an optional basis under the TMA Disability Income plan.

The new service was announced by Richard L. Vardy, MD, chairman, Committee on Association Insurance Programs.

Under the new plan a physician will not be required to be totally disabled to qualify for partial benefits.

Dr Vardy said this feature will provide equity

in payments since many impairments will result in loss of income without involvement of any total disability.

See the November issue of *Texas Medicine* for further details on the new partial disability program.

Heart disease and cancer were leading killers in 1976

Two of every three deaths in Texas during 1976 were caused by diseases of the heart and blood vessels—plus cancer, says the Bureau of Vital Statistics of the Texas Department of Health.

Deaths from all causes in 1976 totalled 100,620, according to Don Carroll, Chief, Bureau of Vital Statistics.

Infant deaths reached the lowest point in Texas in 1976—16 deaths per 1,000 live births.

Last year heart disease killed 33,836 Texans, while cancer accounted for 19,230 deaths.

Even though heart disease is a top killer in Texas, a decline in the death rate from heart attacks has continued for the third straight year. In 1976 the death rate was 118 per 100,000 population. There were 360 fewer deaths than expected from heart attacks, based on 1975 experience. "Whether a three-year declining rate is related to a decline in 'risk factors' for heart attack isn't known," said Dr Richard K. Donelson, Director of the Epidemiology Division.

The mortality rate for all forms of cancer in 1976 showed an increase of 550 more cancer deaths in Texas last year. The mortality rate was 154 per 100,000 population, compared to the 1975 rate of 150.

"Some forms of cancer, such as leukemia and cancer of the mouth and throat, are showing slight decreases," Dr Donelson said. "But unfortunately, cancer of most of the other body sites has continued to cause a gradual increase in the death rate over the years."

The other killers in the top 10 for 1976 were: (3) apoplexy 10,653; (4) accidents 6,468; (5) pneumonia 3,057; (6) diabetes mellitus 1,894; (7) certain causes of infant deaths 1,817; (8) arteriosclerosis 1,691; (9) homicide 1,633; and (10) suicide 1,526.

Deaths caused by septicemia increased from 297 in 1975 to 405 in 1976.

"Several explanations for this increase in septicemia deaths are now being investigated," said Dr Donelson. "One possible explanation is that physicians and hospital workers have recently become more persistent in their attempts to diagnose and make special records of septicemia. This is perhaps due to the increasing emphasis on hospital infection control. The several different types of septicemia appear to have been equally increased," said Dr Donelson. About half of the deaths occurred in persons older than 65, which has been the experience in past years.

The infant death—which includes the first year of life—continued its downward course to 16 deaths per 1,000 live births. Since 1972, when the death rate of infants was 20.2, the number of infant deaths has gradually decreased. Despite this decline, there were 3,502 deaths last year.

"The greatest decline in infant mortality will come in the newborn period and will be influenced by better prenatal care and the continued improvements in hospital facilities and trained personnel," said P. Clift Price, MD, chief of the Bureau of Personal Health Services. "Good intensive care for the premature babies can be a big factor."

Texas Department of Health conducts pilot nursing home hearings

Nursing home residents and their families or guardians have found quite a few things to criticize, but they've also been complimentary at public hearings held by the Texas Department of Health at 12 average facilities in the state.

The samplings, according to State Health Commissioner Fratis L. Duff, MD, were a pilot project to gain experience in handling nursing home hearings statewide. Under a new law passed by the Texas Legislature during a special session called by Gov Dolph Briscoe, the Texas Department of Health received a mandate to conduct at least one public hearing a year in each of the state's nursing homes. Members of the field staff of the Nursing and Convalescent Homes Division and a member of the central office staff in Austin conducted the 12 hearings in the representative nursing homes.

For the 12 hearings conducted, approximately 1,000 letters were sent to relatives or guardians informing them of the public hearings. Total attendance was 340, and 52 persons lodged 82 complaints.

At all the hearings, several individuals ap-

peared to make complimentary remarks. In four of the 12 nursing home facilities, only favorable remarks were made, Dr Duff said.

Complaints received included inadequate staff at times to meet resident needs; inadequate food service, with some complaints concerning quality and quantity of food and others on the methods of serving or lack of assistance to patients in eating; and, environmental sanitation or personal hygiene, including shortages of towels, wash cloths and linens.

Other complaints included one case of mistreatment, loss of clothing, lack of outside activities, a cold room in the winter, overcrowding, profanity by other residents, high costs, and slowness in getting medical or dental care.

All complaints are being investigated, according to Howard C. Allen, Director, Nursing and Convalescent Home Division.

The hearings were conducted at the Four Seasons Nursing Center and Southland Villa, Temple; K-Ware Rest Home, Holland; Claxton Lodge, Colorado City; Bur-Mont Nursing Home, Abilene; Crestview Manor Nursing Home, Belton; Will O'Bell, Bartlett; Benner Convalescent Home Center, Houston; Hardy's Nursing Home, San Antonio; Arlington Nursing Center, Arlington; Village East Nursing Home, Tyler; and Palo Duro Convalescent Center, Claude.

Primary amebic meningoencephalitis case occurs in Texas

A case of primary amebic meningoencephalitis was reported to the Texas Department of Health in early August.

The diagnosis has been confirmed by the Texas Department of Health Laboratory and the Center for Disease Control.

The ameba was isolated from the patient's cerebrospinal fluid. The patient, a 17-year-old girl, had been swimming in Delta Lake in Hidalgo County approximately six days before the onset of symptoms, at which time she was presented to her physicians complaining of a severe headache.

She was later admitted to the hospital, and lapsed into a coma within 72 hours. She died ten days later. Since that time, Delta Lake has been closed to the public.

The first fatal case of primary amebic meningoencephalitis, worldwide, due to the free-living ameba, was described in 1964. To date, 80 cases, nearly all fatal, have been reported. Thirty-two United States cases were reported from Florida, Virginia, California, Georgia, and Texas. The last reported case in Texas occurred in May 1974.

Infection is acquired by swimming in stagnant lakes or ponds where these organisms are commonly found. The incubation period is three to seven days.

The onset of disease is abrupt with severe headaches, nausea, vomiting, malaise, fever, and classic meningeal signs. Patients may complain of alternations in taste and smell.

The Bureau of Communicable Disease Services recommends that physicians be alert to the possible occurrence of *Naegleria fowleri* as an etiologic factor in meningoencephalitis cases. Direct comments, questions, and information about possible new cases to Mark Nelson, MD, EIS officer, Texas Department of Health, Austin.

Texas Chest Foundation honors N. L. Barker, Jr, MD

The Texas Chest Foundation has passed a resolution honoring the late N. L. Barker, Jr, MD, an original Trustee of the foundation and past TMA president.

The resolution recognizes Dr Barker for his activities in medical affairs, including service on the State Board of Health and the Board of Health Resources for more than fifteen years. Dr Barker was also a member of the Texas Medical Association, Southern Medical Association, American Medical Association, and the American Society of Abdominal Surgeons.

September, October, November proclaimed United Way Months in Texas

September, October and November have been proclaimed United Way Months in Texas.

This year's goals exceed $70 million for the 191 United Ways supporting 2,500 different human services.

Last year nearly $65 million was raised.

These private agencies that are beneficiaries of annual United Way campaigns, work cooperatively with public service agencies and share in costs.

Local United Ways support services including visiting nurses, meals for homebound, day care, protective services, family planning, and transportation.

Arlington Neuropsychiatric Center

A PRIVATE PSYCHIATRIC HOSPITAL ADULT UNIT ADOLESCENT UNIT

COMPLETE ACCREDITED FACILITIES, SERVICES AND PROGRAMS, INCLUDING SCHOOL, FOR THE CARE AND TREATMENT OF BOTH ADULT AND ADOLESCENT PATIENTS.

PSYCHIATRY
RICHARD J. CANCEMI, M.D.
ARMANDO DESALOMS, M.D.
ROBERT C. KNIPSTEIN, M.D.
SUE L. NICKEY, M.D.
CARL E. RENFRO, M.D.
MURRAY C. SKAGGS, M.D.
THOMAS C. TIPS, M.D.

PSYCHOLOGY
ANN TUCKER, Ph.D.

SOCIAL WORK
WILLIAM PORTWOOD, MSW

ACTIVITIES THERAPY
GAIL LANE, OTR

ADMINISTRATOR
JAMES H. BINGHAM, JR.

BLUE CROSS AND CHAMPUS APPROVED **MEDICARE CERTIFIED**

701 WEST RANDOL MILL ROAD, ARLINGTON, TEXAS 76012

ADMISSIONS ACCEPTED ON 24-HOUR BASIS (817) 261-3121

Starlite Village Hospital

Center Point, Texas

Ph.: 634-2212
634-2213

- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

R. H. McBride
Administrator

CHAMPUS APPROVED
JCAH: ACCREDITED

Wichita Falls Clinic

501 Midwestern Parkway East, Wichita Falls, Texas 76302

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.

GENERAL THORACIC AND VASCULAR SURGERY
Cecil H. Meares, M.D.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Richard H. Moore, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOLOGY AND RADIOACTIVE ISOTOPES
Thomas K. Bose, M.D.
Matthew Powers, M.D.

PEDIATRICS
Joseph Bilder, Jr., M.D.
George W. Slaughter, M.D.

INTERNAL MEDICINE
P. K. Smith, M.D., F.A.C.P.
I. L. Humphrey, Jr., M.D.
Preston McCall, M.D.
Julian C. Sleeper, M.D., Cardiology
David M. Pogue, M.D., Cardiology
Wendell I. Wyatt, M.D.
Lowell L. Harvey, M.D.

FAMILY PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
James T. Cook, M.D.
Madeleine Kent, M.D.

UROLOGY
John C. Wurster, M.D.

OBSTETRICS AND GYNECOLOGY
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
James M. Missler, Administrator

PARK NORTH GENERAL HOSPITAL

4330 Vance Jackson
San Antonio, Texas 78230
512/341/5131

A private 100-bed patient-oriented hospital offering general medical/surgical as well as comprehensive mental health services. Serving San Antonio and other Texas communities with dedicated professionalism.

A Blue Cross/Medicare/Medicaid approved hospital

For more information contact:

Manuel L. English, Ph.D.
Administrator

Bank Financing for Physicians

We specialize in equipment leasing and financing, unsecured loans and lines of credit to Physicians And we handle it all by mail.

Unsecured loans with optional dollar amounts (to $10,000), optional payment schedules. Equipment leasing to give you tax advantages, restore operating capital, convert unused depreciation to cash. And lines of credit to provide for future cash needs.

We charge tax deductible bank rates. You won't spend any of your valuable time at your bank, and you'll reserve your regular bank credit for times when you really need it.

For further information, complete and mail this coupon today. I want to know more about:

__ Unsecured Loans __ Sale & Lease Back Plans
__ A Line of Credit __ Lease-Purchase Plans
__ Equipment Leasing __ Equipment Financing
__ Other: _____

Dr. _____ Phone _____
Address _____
City _____ State ____ Zip _____

Professional Services Division
TEXAS BANK AND TRUST COMPANY
P. O. Box 101 Jacksonville, Texas 75766

BRIEF SUMMARY OF
PRESCRIBING INFORMATION

ANTIMINTH® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

When you're good people recognize you.
Highly effective
Single-dose convenience
Non-staining
Economical
Pleasant tasting
Antiminth®
(pyrantel pamoate)
equivalent to 50 mg pyrantel/ml
ORAL SUSPENSION
Please see brief summary of prescribing information on facing page.
a drug of choice in pinworm infections
©1977 LONE RANGER T.V., INC.

BREATHING WITH COMFORT.

Choledyl—a highly soluble, true salt of theophylline—rapidly relaxes bronchospasm to promote easier breathing. And, gastric discomfort is minimal.

Because Choledyl is more stable...more rapidly absorbed from the G.I. tract than aminophylline.

Available in both tablets and elixir for patients with obstructive lung disease.

Choledyl® (oxtriphylline) Tablets and Elixir CAUTION: Federal law prohibits dispensing without prescription. Each partially enteric coated tablet contains 200 mg or 100 mg oxtriphylline. Each teaspoonful of the elixir contains 100 mg oxtriphylline; alcohol 20%. *Indications.* Choledyl (oxtriphylline) is indicated for relief of acute bronchial asthma and for reversible bronchospasm associated with chronic bronchitis and emphysema. *Warning.* Use in pregnancy—animal studies revealed no evidence of teratogenic potential. Safety in human pregnancy has not been established; use during lactation or in patients who are or who may become pregnant requires that the potential benefits of the drug be weighed against its possible hazards to the mother and child. *Precautions.* Concurrent use of other xanthine-containing preparations may lead to adverse reactions, particularly CNS stimulation in children. *Adverse Reactions.* Gastric distress and, occasionally, palpitation and CNS stimulation have been reported. *Dosage.* Average adult dosage: Tablets—200 mg, 4 times a day; Elixir—two teaspoonfuls, 4 times a day. *Supplied.* 200 mg yellow, partially enteric coated tablets in bottles of 100 (N 0047-0211-51) and 1000 (N 0047-0211-60); Unit Dose—200 mg tablets (N 0047-0211-11); 100 mg red, partially enteric coated tablets in bottles of 100 (N 0047-0210-51). Elixir—bottles of 16 fl oz (1 pint) 474 ml (N 0047-0215-16). *Toxicity.* Oxtriphylline, aminophylline and caffeine appear to be more toxic to newborn than to adult rats. No teratogenic effects have been seen. Full information is available on request.

CH-GP-51-4/C

WARNER/CHILCOTT
Division, Warner-Lambert Company
Morris Plains, N.J. 07950

CHOLEDYL®
(OXTRIPHYLLINE)

SINGLE-ENTITY
BRONCHODILATION
MINIMAL GASTRIC DISCOMFORT

Board of Human Resources raises Medicaid reimbursement

The Texas Board of Human Resources has voted to raise the Medicaid reimbursement to physicians to 100% of the Medicare reasonable charge profiles.

Profile updating began in August, but profiles will be updated and increased payments will begin in October.

The Council on Tax-Financed Health Care Programs and the Texas Medical Association supported the increase.

Medicaid reimbursement was pegged at the level of 95% of reasonable charge provided under Medicare.

The Texas Medical Association is continuing its efforts to elevate reimbursement levels for physicians in small communities and in rural areas who render services to Medicare and Medicaid patients.

AMA invites nominees for major annual awards

The American Medical Association invites Texas physicians to consider submitting nominees for its major annual awards. Physicians and non-physicians are recognized for their contributions to research, medical practice, medical education, and community service.

Nominations for the Distinguished Service Awards, the Citation of a Layman, the Rush Award, and the Scientific Achievement Award will be considered by the AMA Board of Trustees at its Oct 19-22 meeting. The deadline for receipt of nominations is Oct 1, 1977.

Nominations for the Sheen, Schwartz, and Goldberger Awards will be considered during the AMA Board of Trustee's March 9-11, 1978 meeting. The deadline for receipt of nominations is Feb 1, 1978.

The Distinguished Service Award is made to a member of the Association for meritorious services in the science and art of medicine. It includes a medal and citation.

The Citation of a Layman for Distinguished Service is made to a person not of the medical profession who has contributed to the achievement of the ideal of American medicine by aid and cooperation in the advancement of medical science, medical education, or medical care.

The Benjamin Rush Bicentennial Award for Citizenship and Community Service includes a $5,000 stipend and a commemorative plaque. Mario Ramirez, MD, a Rio Grande physician, was last year's recipient of the Benjamin Rush Award.

The Doctor Rodman E. Sheen and Thomas G. Sheen Award consists of a $10,000 cash prize and a commemorative plaque, presented annually to an American physician or physicians in recognition of outstanding contributions in medicine.

The Arnold and Marie Schwartz Award in Medicine provides a $5,000 stipend and a plaque. Physicians, 50 years of age or younger, are eligible for the award.

The Scientific Achievement Award is given to either a physician or non-physician scientist selected by the AMA Board of Trustees. This award is not necessarily given annually, but only on special occasions in recognition of outstanding work. Physician candidates must be AMA members.

The Joseph B. Goldberger Award in Clinical Nutrition includes a commemorative plaque and $1,000. The award was established to serve as a stimulus to medical investigators in advancing public and personal health, and to honor physicians who have made important contributions to the knowledge of nutrition. Candidates must be members of the American Medical Association.

Association members desiring to nominate physicians should send nominations to J. E. Miller, MD, Texas Medical Association, 1801 N. Lamar Blvd., Austin, TX 78701.

Teens rank physicians tops in honesty

The nation's teenagers give top ratings to physicians as professionals who are honest and ethical, the latest Gallup Youth Survey reveals.

While two of every three (64%) teenagers think highly of physicians, advertisers are ranked lowest by them, according to the poll. Only 20% thought "advertising practitioners" are honest and ethical.

Physicians are followed closely in the adolescents' esteem by clergymen and lawyers. Less than half of the youths think college teachers, congressmen, senators, and journalists are honest and ethical.

Joining advertisers in the bottom ranks are business executives and labor union leaders, the survey said.

National Cancer Institute releases cancer report

Most cancer patients are not surviving much longer today than they did 25 years ago, according to the latest survey by the National Cancer Institute which compared mortality data from 1950-1959, 1960-1965, and 1966-1973. The statistics are broken down separately for whites and blacks because of sharp differences in survival.

Of the 10 most common cancers, only bladder and prostatic have seen more than a 5% increase in the percentage of white patients surviving five years. For blacks, breast, bladder, prostate, and rectal cancer all showed more than a 5% gain in patient five-year survival.

Because of the increased relative frequency of lung cancer, however, and its continued low survival rate, the average survival rate for all cancer patients has remained virtually unchanged since the 1950s.

Forty-one percent of all white cancer patients and 32% of blacks survived five years in the latest measuring period, compared to a 39% five-year survival for whites, and 29% for blacks in the 1950s.

The NCI report, "Cancer Patient Survival," was based on 453,467 cases drawn from the California Tumor Registry, the Connecticut Tumor Registry, Charity Hospital in New Orleans, and University Hospitals in Iowa City, Iowa.

The latest report on Hodgkins Disease shows that five-year survival averaged 54% for the period 1965-1969, up from 30% in the 1950s.

Four encephalitis cases reported

A total of four documented cases of St Louis encephalitis in humans have been reported this year, according to the Center for Disease Control (CDC).

Two of the cases involved residents of Dallas, and two others occurred in Memphis.

Meanwhile, epidemiologically significant SLE virus transmission has been found among bird populations in at least seven states, the CDC said. They include Illinois, Indiana, Kentucky, Mississippi, Ohio, Tennessee, and Texas.

Surveillance of birds from Louisiana and Alabama have shown no evidence of recent SLE virus transmission.

Cancer Patient Five-Year Survival Rates

	Blacks		Whites	
	1950-59	1967-73	1950-59	1967-73
Breast	43%	51%	61%	69%
Bladder	27	34	54	63
Prostate	38	54	47	59
Rectum	23	31	40	44
Uterine	45	47	72	77
Cervix	49	53	60	58
Colon	31	35	43	46
Stomach	9	14	12	12
Lung	5	6	7	9
Pancreas	1	1	1	3

Source: National Cancer Institute

Surgery without transfusions is proved safe

Cardiovascular operations can be performed safely without blood transfusions, says a report by Texas MDs David A. Ott and Denton A. Cooley in the Sept 19 *Journal of the American Medical Association.*

Drs Ott and Cooley, of the Texas Heart Institute, Houston, report on a 20-year experience of surgery performed on 542 Jehovah's Witness patients, who refuse blood transfusions for religious reasons. Early mortality rate was 9.4%.

Only three of the 51 deaths were related directly to loss of blood. Postoperative anemia was a contributing factor in 12 other deaths. The other deaths were from causes not related to loss of blood.

"Our experience supports the contention that patients who refuse blood transfusions for religious reasons can undergo major cardiovascular operations with an acceptably low risk," say Drs Ott and Cooley.

Discussing their experience in performing heart and blood vessel surgery on members of the fundamentalist religious body, the Texas doctors declare:

"The surgeon who agrees to treat Jehovah's Witnesses should respect their religious beliefs or refer them elsewhere. To our knowledge, no claims have been made against a physician for failing to administer blood to a Jehovah's Witness.

"We believe that a patient should have a right to make his or her own decision, and that the physician has a moral responsibility to respect the wishes of the patient. We have never violated the contract made before operation that blood will not be administered regardless of the circumstances or need."

In the case of children, if extensive blood loss is anticipated surgery should not be recommended, they say.

Independence for older persons urged by American Medical Association

The American Medical Association has called for a national policy toward the aged that will keep them out of institutions as long as possible, keep them working and contributing to society, and maximize their continued independence.

"The one thing most usually found as a common denominator among aged people is an interest in life, the desire to continue living an active and useful existence among other people," James H. Sammons, MD, executive vice president of AMA declared.

The medical profession strongly encourages the development of expanded home health care services, including both the strictly health-care segments of that program and the more general homemakers' and meals-on-wheels type of service. Physicians would recommend use of services for their patients if adequate services were available, Dr Sammons said.

In a communication to US Sen Lawton Chiles (D-Fla) of the Senate's Special Committee on Aging, Dr Sammons said that it is "a myth that the aged are, as a group, fragile, isolated and despairing, and are merely waiting the inevitable."

He cited recent surveys indicating that only 12% of older people complain of loneliness, only 7% feel unneeded, and only 6% believe they do not have adequate activities to fulfill their lives. Physical health is better than generally believed. They generally function with reasonable independence in the community. Eighty-two per cent have no limitation in their mobility and only 5% are confined to the home.

"Many of those persons over age 65 are very much like those under age 65—they are active and alert and desire to participate in community life."

Medicare provides billions of dollars in hospital care for the aged, both needy and non-needy, and pays for physicians services, limited home health care and nursing home care. Yet most older persons need only a little help—assistance in personal shopping or someone to prepare an occasional hot meal—and these small needs are sometimes the hardest to meet, Dr Sammons said.

The AMA also recommended modification of tax laws to encourage more family support of the needy.

Texas Medicine announces 1978 continuing education directory

Texas Medicine has announced plans for its eighth annual *Texas Continuing Education Directory for Physicians.*

The directory will contain courses designed specifically for physicians and will be published

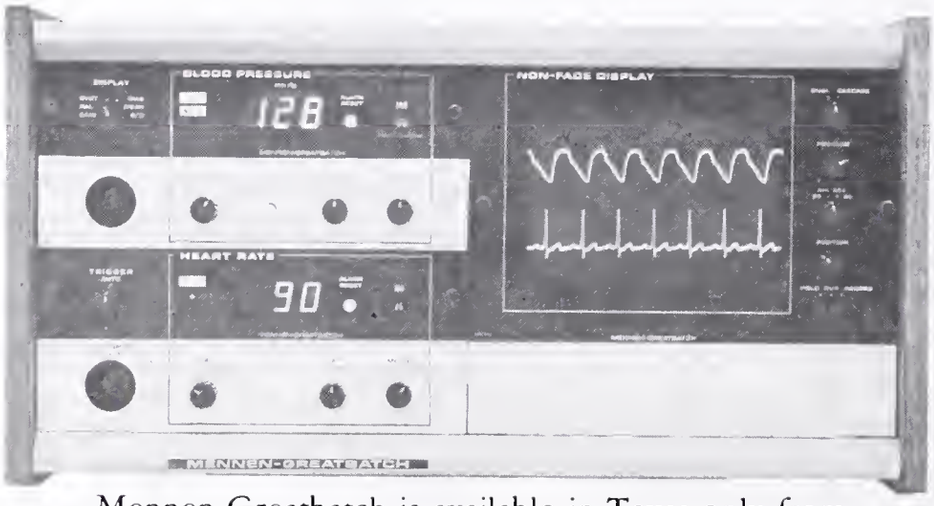
GENTEC FEATURES A TEXAS EXCLUSIVE: MENNEN-GREATBATCH CLINICAL AND DIAGNOSTIC SYSTEMS

Invest in a Mennen-Greatbatch instrument or system from Gentec Hospital Supply and you get more than the leading patient monitoring equipment.

Gentec can assist you with complete department planning and layout, system design and integration, architectural and electrical outlines, educational aids and programs.

And when your MG equipment goes to work, Gentec backs it with 24-hour service and complete warranty coverage.

See Gentec for the complete line of Mennen-Greatbatch systems, including:
Telemetry Monitoring · Microprocessors In-Patient Monitoring
Computer-Assisted Cath Lab · Data-Base Management · High-Energy Defibrillators



Mennen-Greatbatch is available in Texas only from

Gentec
HOSPITAL SUPPLY COMPANY
Division of Foremost-McKesson, Inc. *Terrell Supply Division*

FORT WORTH/DALLAS, P.O. Box 310 76101, (817) 336-8731, (214) 429-2566 / AMARILLO, P.O. Box 1587 79106, (806) 376-4696
AUSTIN, P.O. Box 4415 78723, (512) 478-2559 / LUBBOCK, P.O. Box 2913 79408, (806) 763-4655 / SAN ANTONIO, P.O. Box 32107 78216, (512) 344-0213 / HOUSTON, P.O. Box 1609 77001, (713) 237-9678

in late December 1977. In addition, the directory will carry a listing of medical meetings scheduled during the year.

Hospitals, schools, medical societies, and others wishing to have courses and meetings for physicians included in the 1978 directory should submit the information by Oct 1 to: *Texas Medicine*, 1905 N Lamar Blvd, Austin 78705.

AMA report criticizes Health Maintenance Organizations

The American public has been getting "a superficial sales pitch" on the worth of Health Maintenance Organizations (HMOs), according to a study by the American Medical Association.

The report dealt with important aspects of the HMO business that government reports, favorable to HMOs, "usually fail to reveal," said the AMA.

The Carter Administration pledged a renewed effort to expand HMOs and strengthen the federal aid program. But the review by the AMA raised questions about some widened public assumptions about HMOs and claims made in their behalf.

Advocates of HMOs have claimed that HMOs place a special emphasis on preventive care, "but recent studies indicate that fee-for-service practitioners provide more preventive care than do HMOs," said the AMA report.

According to the report, "There is no clear indication that unit costs (the cost to provide a given item of medical care) are lower in an HMO. However, premiums for HMO-type plans tend to be about 25% higher than those for conventional health insurance."

"Everything considered, it seems clear that the American public has been overpromised, where HMOs are concerned. Where an HMO holds costs down, it is apt to be due to reduced utilization and not to health 'maintenance'," the report concludes.

TMA House of Delegates will meet in Austin Nov 12 and 13

The fall session of the Texas Medical Association House of Delegates will be held Saturday, Nov 12 and Sunday, Nov 13 in Austin.

The session will open at 8 am Saturday at the Austin Hilton Inn, followed by reference committee hearings at 9 am. A special reference committee will convene at 10 am to consider the report of the Executive Board's Ad Hoc Committee to Study the Association's Organizational Structure and Function.

The House of Delegates will act on reference committee reports at the second session at 8 am Sunday.

An open hearing to discuss the report of the Executive Board's Ad Hoc Committee to Study the Association's Organizational Structure and Function will begin at 8 pm Friday, Nov 11 at the Austin Hilton. The hearing is voluntary and is open to all members of the Texas Medical Association.

Most doctors drive smaller cars

Popular belief to the contrary, most doctors do not drive Lincolns or Cadillacs.

Actually, two-thirds of American doctors surveyed in an American Medical Association poll make their practice rounds in intermediate, compact or economy cars.

The stereotype that places the typical American physician behind the wheel of a big luxury car as he makes his professional rounds doesn't mesh with the findings of the survey, says the report in the Aug 22 issue of *American Medical News*.

Like many Americans, physicians apparently are more often driving smaller cars that are more economical to operate. While 37.3% of the responding physicians report they drive full-size cars, 23.5% say they drive an intermediate car; 19.6% a compact car; 19.6% an economy car for practice associated driving.

Texas Medical Association coordinates Physician's Placement Service

The Texas Medical Association coordinates a Physician's Placement Service for communities seeking physicians, physicians seeking associates, and physicians seeking locations.

Two publications, "Physicians Seeking Locations in Texas" and "Opportunities for Practice in Texas," are prepared and distributed bimonthly.

Physicians seeking locations receive the list of opportunities while communities and physicians

receive the list of physicians available for practice.

The service is provided without charge. For information write the Department of Medical Service, Texas Medical Association, 1905 N Lamar Blvd, Austin, 78705.

New time deposit account available to TMA Members' Retirement Plan members

A new time deposit open account will be available to TMA physicians and their employees under the TMA-Members' Retirement Plan & Trust effective immediately.

The interest rate on the new class of deposit will be the maximum allowable by the Federal Reserve Board, currently 7 ¾ % per year. The minimum maturity is three years for the entire account. Interest is compounded quarterly.

In addition to directing new contributions to the new class of deposit, other existing investments under the program can be converted to the open account for a nominal charge, generally $5 per participant.

If funds are currently invested in a Mercantile Certificate of Deposit at a different rate, the funds can be converted to the higher rate open account without interest penalty.

To convert existing investments to the open account, physicians must provide the Trustee with specific written instructions covering the physicians and employees. The deposit is Investment Media #05.

There is a substantial interest penalty for early redemption of the time deposit unless funds are withdrawn from the trust due to death, disability, or attainment of age 59½.

For more information contact Frank C. Ruscitto, Trust Officer, Mercantile National Bank at Dallas, PO Box 5415, Dallas, Texas 75222, phone 214-741-4181.

Physicians involved in other KEOGH plans should contact the Trustee of their plan for availability of a similar option.

Coming next month

Scientific articles scheduled for publication in November are on evaluation of the hypertensive child, new technology in management of chronic asthma in children, acquired hemolytic anemias in children, an exercise program for young women, and animal bites as a public health disease.

Investment performance for TMA Members' Retirement Plan and Trust

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1977 Through 8/31/77	3 Years Ended 12/31/76	5 Years Ended 12/31/76	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	— 6.0%	− 9.3%	− 8.3%	1.7%
Loomis-Sayles Mutual Fund	— 8.7%	− 1.6%	− 4.4%	3.8%
Mercantile Bank Equity Fund	— 5.9%	+ 5.9%	−17.8%	4.1%
Mercantile Bank Fixed Income Fund	— 0.3%	+ 0.2%	− 5.5%	7.2%
T Rowe Price Growth Stock Fund	— 8.3%	− 2.6%	−16.6%	2.2%
T Rowe Price New Income Fund	— 1.1%	+ 2.7%	N/A	7.7%
Stein Roe & Farnham Balanced Fund	— 8.3%	− 0.5%	− 2.7%	3.3%
Standard & Poor 500 Stock Average	— 9.9%	+10.4%	+ 5.3%	—
Dow Jones Industrial Average	—14.2%	+18.1%	+12.9%	—

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

AUSTIN: TEXAS MEDICAL DISCLOSURE PANEL. Commissioner of the Department of Health, Fratis Duff, MD, has announced the appointments to the Texas Medical Disclosure Panel included in provisions of HB1048. The panel by statute is composed of six physicians and three attorneys. The appointments include Richard E. Leigh, Jr, MD, Houston; Ronald C. Jones, MD, Dallas; John David Bonnet, MD, Temple; James Henry Duke, MD, Houston; Drue Ware, MD, Fort Worth; and Mickey Holcomb, DO, El Paso. The attorneys are Lloyd Lochridge, Austin; J. Mark McLoughlin, San Angelo; and Mark Martin, Dallas. The panel met Sept 10, 1977.

AUSTIN: BOARD OF HEALTH. Gov Dolph Briscoe has appointed Ray Santos, MD, Lubbock, to the Texas Board of Health, replacing deceased Nym L. Barker, MD, for a term to expire Feb 1, 1979.

WASHINGTON: COST CONTAINMENT. By a vote of 9-3, the Senate Human Resources Committee has reported out Cost Containment Bill S-1391 largely shaped by Sen Edward Kennedy, Massachusetts, Chairman of its Health Subcommittee. The measure includes a 9% cap on hospital costs sought by the Carter administration. The legislation includes a two-year moratorium on hospital construction or expansion except where state plans call for expansion. HEW had proposed that hospital construction be limited to $2.5 billion, down sharply from recent $7 billion level. The Kennedy version would also prohibit physicians from adding equipment costing over $150,000 except where a state health agency approves. The limit is intended to stem the rush to purchase CAT scanners and other expensive and highly sophisticated technology. The measure now goes to the Senate Finance Committee which is expected to significantly reshape it. The measure must also go to House Ways and Means Subcommittee and Commerce Health Subcommittee. Both committees have been marking up different versions of cost control that still must be reconciled before going to House floor. It is now clear that Carter's Oct 1 target date for passage of the measure will not be met. Cost control legislation is not on the priority list of ten bills Sen Majority Leader Robert Bird has released as "musts" before Congress adjourns. The target for adjournment for the first session is October.

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber, Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

AUSTIN: TECH REGENT APPOINTMENTS. Gov Dolph Briscoe has made three appointments to the Texas Tech University Board of Regents: Roy K. Furr, Lubbock, replacing Bill E. Collins; Clint Formby, Hereford, reappointed; and James L. Snyder, Baird, replacing John J. Hinchey, MD. All terms will expire Jan 31, 1983.

NEBRASKA: MALPRACTICE BILL UPHELD. The Nebraska Supreme Court has upheld several provisions of the state's medical malpractice legislation, including provisions relating to mandatory pretrial screening, collateral source, excess recovery fund, and the $500,000 limitation on damages. The Court found the law to be in the public interest and not unconstitutional.

WASHINGTON: MEDICAL SCHOOL ADMISSION POLICIES. This fall the Supreme Court of the United States will hear a case brought by Allan Bakke. The case is a test case on medical school admission policies based on racial quotas. Bakke was denied admission to the University of California Medical School at Davis. He asserts he was excluded solely because of his race as a result of the medical school's special admission policy of reserving a percentage of the first year slots for minority applicants. Arguments on the case are expected to be heard during the court's October session.

AUSTIN: STATE BOARD OF INSURANCE. The Medical Protective Company has filed an amended policy form for approval with the Texas State Board of Insurance. In addition to the policy form, certain re-classifications were considered. The Board approved technical changes and denied the Medical Protective Company's request to amend the consent form (physician's approval to settle) from a full consent form to a limited consent form. The Board did approve the Medical Protective's request to drop all forms of surcharges on a physician who has a claim whether or not there is a paid loss.

AUSTIN: HOUSE INTERIM COMMITTEES. Speaker of the House Bill Clayton has made appointments to interim study committees for the 65th Legislature. The Committee on Health and Welfare Subcommittee on Appropriative Matters for MHMR: Emmett H. Whitehead, Vice Chairman, Ernestine Glossbrenner, Frank Madla, and Chase Untermeyer; Subcommittee for Appropriative Matters for Health and Welfare: Mike Ezzell, Vice Chairman, Wilhelmina Delco, Buck Florence, Fred Orr, and Tim Von Dohlen; Subcommittee on Health: Chris Miller, Chairman, Chase Untermeyer, Vice Chairman, Buck Florence, Fred Orr, and Tim Von Dohlen; Subcommittee on Aging: Frank Madla, Chairman, Ernestine Glossbrenner, Vice Chairman, Wilhelmina R. Delco, Buck Florence, and Chris Miller; Subcommittee on Public Welfare: Mike Ezzell, Chairman, Arnold Gonzales, Vice Chairman, Wilhelmina Delco, Ernestine Glossbrenner, Emmett Whitehead; Subcommittee on MHMR: Emmett H. Whitehead, Chairman, Fred Orr, Vice Chairman, Arnold Gonzales, Chase Untermeyer.

AUSTIN: SENATE INTERIM APPOINTMENTS. Lt Gov Bill Hobby has announced appointments to the Legislative Budget Board and the Legislative Council. Senators appointed to Legislative Budget Board are A. M. Aikin, Jr, Paris; Ray Farabee, Wichita Falls; Grant Jones, Abilene; and W. T. (Bill) Moore, Bryan. Appointments to the Legislative Council are Senators Tom Creighton, Mineral Wells; Ron Clower, Garland; Gene Jones, Houston; W. E. "Pete" Snelson, Midland; and John Traeger, Seguin.

AUSTIN: BOARD OF NURSE EXAMINERS. Appointments to the Board of Nurse Examiners by Gov Dolph Briscoe are Mrs Claude B. Jacobs, Yoakum, and Mrs June Murphy, Lindale. Their terms will expire Jan 31, 1983.

AUSTIN: BOARD OF MEDICAL EXAMINERS. Gov Briscoe has appointed Jesse D. Ibarra, Jr, MD, Temple, tot he Texas State Board of Medical Examiners to replace Jose G. Rodarte, MD, who resigned from the board. Dr Ibarra's term will expire April 13, 1981.

AUSTIN: GARLAND REPRESENTATIVE. In a special election to fill the unexpired term of Rep Ken Vaughan, who resigned to become a county court-at-law judge in Dallas County, Mrs Harris (Anita) Hill, Garland, was elected to the House to represent District 33D.

THE ANXIETY-SPECIFIC.

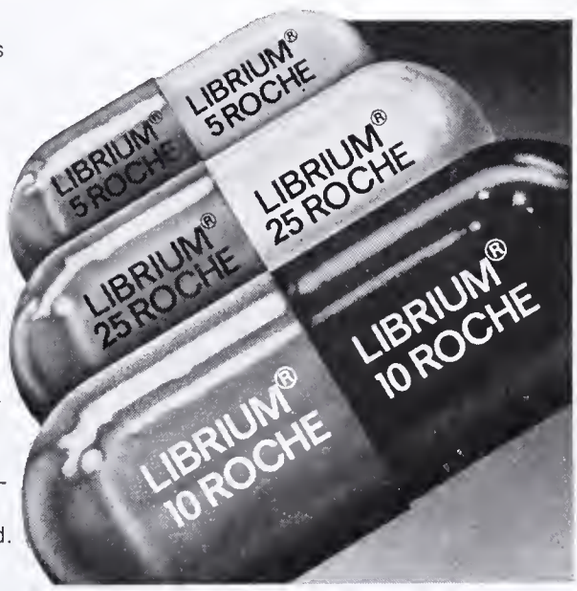
- a predictable pattern of patient response
- seldom associated with serious side effects, in proper dosage
- rarely interferes with mental acuity
- used concomitantly with many primary medications
- three dosage strengths meet most patient needs

LIBRIUM® ℞

chlordiazepoxide HCl/Roche

5mg, 10mg, 25mg capsules

Libritabs® (chlordiazepoxide) available in 5 mg, 10 mg and 25 mg tablets.



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) *Capsules,* 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) *Tablets,* 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see following page.

THE ANXIETY-SPECIFIC.

Since its discovery in the research laboratories at Roche, Librium has been the object of ongoing pharmacologic and clinical investigation.

The published record on Librium is enormous. So large, in fact, we put it into a computer literature retrieval system to make it more accessible in answering your inquiries.*

It's a record that reveals a consistent pattern of patient response. A highly favorable benefits-to-risk ratio. And minimal interference with many primary medications.

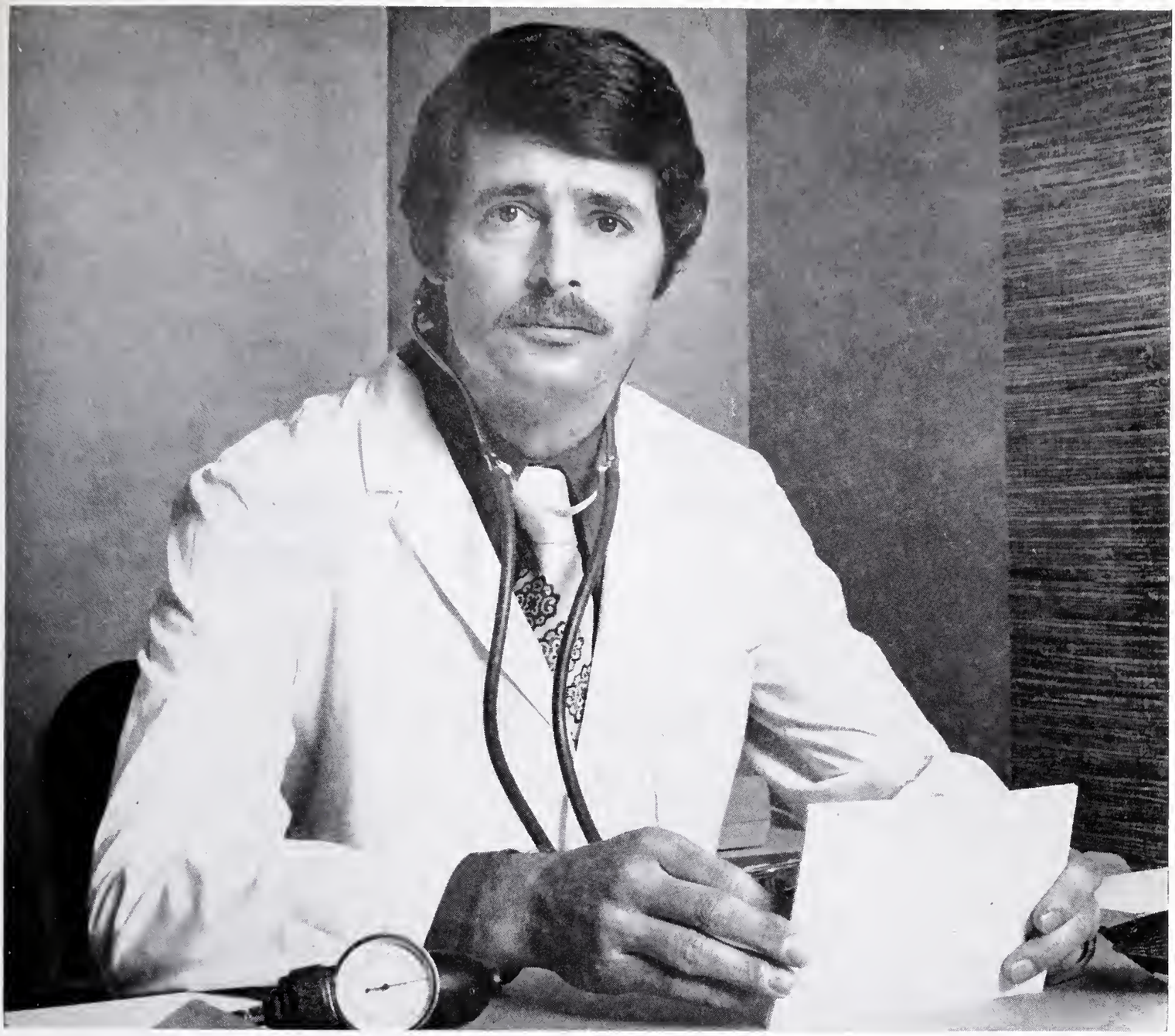
Doing one thing well. Basically, that's what Librium is all about.

LIBRIUM® ℞
chlordiazepoxide HCl/Roche

ROCHE

*If you have a question about Librium or any other Roche product, write to Professional Services, Roche Laboratories, Nutley, New Jersey 07110.

Please see preceding page for a summary of product information.



If you take care of your people, they'll take care of you.

It's simple human relations.

To keep good people on your staff—whether you're just starting a practice, or well along in your career—you've got to pay them well. Not with just money, but with other things, like health insurance.

And, being in the medical profession, you know how important it is to provide your people with the best coverage available.

Blue Cross and Blue Shield coverage will assure you of that. We return more of our premiums in claim payments to policyholders than most other major insurance companies. And we don't set maximum dollar limits on most hospital services.

You might get group health insurance at a lower rate. But when you think of how much your people are worth to you, we think you'll find them worth every nickel that Blue Cross and Blue Shield coverage costs.

Do you think enough of your people to provide the best?

Blue Cross
GROUP HOSPITAL SERVICE, INC
Blue Shield
GROUP LIFE & HEALTH INSURANCE COMPANY
of Texas

®, Registered Mark Blue Cross Association
® Registered Service Mark of the National Association of Blue Shield Plans

MEETINGS

AMERICAN COUNCIL OF OTOLARYNGOLOGY

The first annual meeting of the American Council of Otolaryngology will be held Thursday, Oct 6, 1977, in Dallas. The meeting begins at 1:30 pm in the Pavilion Room of the Fairmont Hotel and is expected to adjourn at 5 pm. James H. Sammons, MD, executive vice-president of the American Medical Association, will be the guest speaker. During the meeting, four new members will be elected to three-year terms on the Board of Directors and reports of officers and committees will be reviewed.

Contact: 1100 17th St, NW, Suite 602, Washington, DC 20036

AMERICAN COLLEGE OF SURGEONS

Robert S. McNamara, president of The World Bank, and Theodore Cooper, immediate past assistant secretary for health, Department of Health, Education, and Welfare, are among the featured speakers at the 1977 Clinical Congress of the American College of Surgeons. The meeting will take place in Dallas, Oct 17-21, 1977. The scientific program includes more than 100 hours of panel discussions, 18 postgraduate courses ranging from six to twelve hours each, more than 100 medical motion pictures, more than 250 research papers, and more than 350 scientific and technical exhibits. The Fairmont Hotel and the Dallas Hilton will be co-headquarters hotels, and the scientific and technical exhibits will be shown in the Dallas Convention Center. The scientific program will be presented in the Convention Center, the Fairmont, the Dallas Hilton, and the Sheraton-Dallas.

Contact: CR Hanlon, Dir, 55 E Erie St, Chicago 60611

AMERICAN GROUP PRACTICE ASSOCIATION

Area health planning, quality control in the clinic setting, prepayment experiences, and proposed solutions to current problems in our health care delivery system are among the issues which will be examined during the 28th annual meeting of the American Group Practice Association. The meeting will be in Houston, Oct 5-8, 1977. Major governmental officials and elected representatives have been invited to share their viewpoints with the group practice physicians.

Contact: 20 S Quaker Lane, Alexandria, Va 22314

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF FAMILY PHYSICIANS, 1977 Scientific Assembly, Las Vegas Convention Center, Oct 10-13, 1977. Dr Alex Comfort, author of Joy of Sex, to make presentation on geriatrics. Program divisions: medical lectures, continuing education courses, dialogues, clinical seminars, live teaching demonstrations, programmed instruction courses, taping and strapping demonstrations, fractures demonstrations and scientific and technical exhibits. One hour of prescribed AAFP continuing education credit for each hour of participation. President's reception and dance, Wed, Oct 12. Contact: 1740 W 92nd St, Kansas City, Mo 64114.

AMERICAN SCHOOL HEALTH ASSOCIATION, 51st Annual Convention, Hyatt Regency, Atlanta, Oct 12-16, 1977. Keynote address from Martin M Cummings, MD, director, National Library of Medicine. Special one-day pre-convention workshop on change agents in the school setting. Free table-top space to institutions to display educational programs, graduate assistantships and fellowships, employment opportunities to convention attendees. Contact: SJ Jerrick, Exec Dir, Box 708, ASHA National Office Bldg, Kent, Ohio 44240.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS, 34th Annual Meeting, Hyatt Regency, Memphis, Tenn, Oct 13-15, 1977. Auxiliary luncheon features Dr George Benson, The National Education Program, American Heritage Center, Searcy, Ark. President's luncheon, banquet Friday evening, committee reports, election of officers, action on resolutions. Registration fee, $25. Contact: 2625 Butterfield Rd, Oak Brook, Ill 60521.

For other courses and symposia, see Continuing Education Courses, pp 41-43.

Calendar of Listings

■ Denotes Texas Meetings

OCTOBER

AMERICAN ACADEMY FOR CEREBRAL PALSY AND DEVELOPMENTAL MEDICINE, Atlanta, Oct 5-9, 1977. JE Bryan, Exec Sec, 1255 New Hampshire Ave, Washington, DC 20036.

■ AMERICAN ACADEMY OF CHILD PSYCHIATRY, Houston, Oct 19-21, 1977. VQ Bausch, Exec Dir, 1800 R St NW, Washington, DC 20009.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Las Vegas, Nev, Oct 10-13, 1977. R Tusken, Exec Dir, 1740 W 92nd St, Kansas City, Mo 64114.

■ AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY, Dallas, Oct 2-6, 1977. 15 Second St SW, Rochester, Minn 55901.

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, Bal Harbour, Miami, Fla, Oct 30-Nov 4, 1977. CC Herold, Exec Dir, 30 N Michigan Ave, Suite 922, Chicago 60602.

AMERICAN ACADEMY OF PSYCHIATRY AND THE LAW, New Orleans, Oct 20-23, 1977. WD Weitzel, MD, Department of Psychiatry, College of Medicine, University of Kentucky, Lexington, Ky 40506.

AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE, Anaheim, Calif, Oct 2-7, 1977. Joseph J Garvey, Exec Sec, 2317 W Jefferson, Joliet, Ill 60435.

AMERICAN ASSOCIATION OF PUBLIC HEALTH PHYSICIANS, Washington, DC, Oct 30-Nov 1, 1977. JV Sessums, Jr, MD, Sec-Treas, 1703 Ridgemont, Austin, Tex 78723.

AMERICAN ASSOCIATION FOR THE STUDY OF LIVER DISEASES, Chicago, Oct 31, 1977. MA Rothschild, MD, Sec-Treas, VA Hospital, First Ave at E 24th St, New York 10010.

AMERICAN CLINICAL AND CLIMATOLOGICAL ASSOCIATION, Colorado Springs, Colo, Oct 23-26, 1977. JE Wood, MD, Sec-Treas, Pennsylvania Hospital, Philadelphia 19107.

AMERICAN COLLEGE OF CHEST PHYSICIANS, Las Vegas, Nev, Oct 30-Nov 3, 1977. 911 Busse Highway, Park Ridge, Ill 60068.

AMERICAN COLLEGE OF GASTROENTEROLOGY, New Orleans, Oct 23-29, 1977. D Weiss, Exec Dir, 299 Broadway, New York 10007.

AMERICAN COLLEGE OF PREVENTIVE MEDICINE, Atlanta, Oct 30-31, 1977. W Bentley, Exec Dir, 801 Old Lancaster Rd, Bryn Mawr, Pa 19010.

■ AMERICAN COLLEGE OF SURGEONS, Dallas, Oct 17-21, 1977. CR Hanlon, Dir, 55 E Erie St, Chicago 60611.

■ AMERICAN COUNCIL OF OTOLARYNGOLOGY, Dallas, Oct 6, 1977. Harry W McCurdy, MD, FACS, Exec Dir, 1100 17th St, NW, Suite 602, Washington, DC 20036.

AMERICAN DENTAL ASSOCIATION, Miami, Oct 9-13, 1977. C Gordon Watson, DDS, 211 E Chicago Ave, Chicago 60611.

AMERICAN DIETETIC ASSOCIATION, Los Angeles, Oct 10-14, 1977. Clara Zempel, RD, 430 N Michigan Ave, Chicago 60611.

■ AMERICAN GROUP PRACTICE ASSOCIATION, Houston, Oct 5-8, 1977. WG Davis, MD, Exec Vice-pres, 20 S Quaker Lane, Box 949, Alexandria, Va 22313.

AMERICAN HUMANE ASSOCIATION, Honolulu, Oct 16-22, 1977. Box 2788, Denver 80201.

■ AMERICAN INSTITUTE OF ULTRASOUND IN MEDICINE, Dallas, Oct 29-Nov 4, 1977. D LaMaster, Mng Editor, Box 25606, Oklahoma City 73125.

AMA REGIONAL MEETING, Huron, Ohio, Oct 7-9, 1977. AMA, Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMA REGIONAL MEETING, Honolulu, Oct 30-Nov 3, 1977. AMA, Department of Scientific Assembly, 535 N Dearborn St, Chicago 60610.

AMA SEMINAR ON NEGOTIATIONS, Atlanta, Oct 15-17, 1977. AMA, Department of Negotiations, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL RECORD ASSOCIATION, Atlanta, Oct 16-21, 1977. Mary-j Waterstraat, RRA, 875 N Michigan Ave, Chicago 60611.

AMERICAN MEDICAL WRITERS ASSOCIATION, New York, October 1977. L Sablack, Exec Sec, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN PHYSIOLOGICAL SOCIETY, St Louis, Oct 22-27, 1977. OE Reynolds, PhD, Exec Sec-Treas, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SCHOOL HEALTH ASSOCIATION, Atlanta, Oct 13-16, 1977. SJ Jerrick, Exec Dir, Box 708, ASHA National Office Bldg, Kent, Ohio 44240.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, New Orleans, Oct 15-19, 1977. JW Andes, Exec Sec, 515 Busse Highway, Park Ridge, Ill 60068.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS, Atlanta, Oct 17-23, 1977. WF Hoffman, Jr, Exec Dir, 2400 E Devon Ave, Suite 218, Des Plaines, Ill 60018.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Las Vegas, Nev, Oct 20-28, 1977. DL Gilcrest, Exec Dir, 2100 W Harrison St, Chicago 60612.

AMERICAN SOCIETY OF MAXILLOFACIAL SURGEONS, San Francisco, Oct 30-Nov 4, 1977. CA Janda, MD, DDS, Sec, 120 Oakbrook Center Mall, Westchester, Ill 60153.

CENTRAL ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Biloxi, Miss, Oct 6-8, 1977. David G Anderson, MD, Sec-Treas, Women's Hospital, University of Michigan Medical Center, Ann Arbor, Mich 48109.

■ MEDICAL GROUP MANAGEMENT ASSOCIATION, Houston, Oct 9-14, 1977. RV Grant, PhD, Exec Dir, 4101 E Louisiana Ave, Denver 80222.

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO, Phoenix, Ariz, Oct 12-15, 1977. Lucy A Vernetti, MD, 333 W Thomas Rd, Suite 207, Phoenix, Ariz 85013.

■ TEXAS STATE BOARD OF EXAMINERS IN THE BASIC SCIENCES, Austin, Tex, Oct 14-15, 1977. Betty J Anderson, Exec Sec, 319 Sam Houston State Office Bldg, Austin, Tex 78701.

SOCIETY FOR COMPUTER MEDICINE, Las Vegas, Nev, Nov 9-11, 1977. MA Jenkin, MD, 5100 Edina Industrial Blvd, Suite 231F, Edina, Minn 55435.

NOVEMBER

AMERICAN ACADEMY OF PEDIATRICS, New York, Nov 5-10, 1977. Robert G Frazier, MD, Exec Officer, 1801 Hinman Ave, Evanston, Ill 60201.

AMERICAN ASSOCIATION OF BLOOD BANKS, Atlanta, Nov 11-16, 1977. Lois J James, Asstnt Exec Dir, 1828 L St, NW, Washington, DC 20036.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, New Orleans, Nov 9-13, 1977. Howard Silber, Exec Officer, Box 912, Omaha 68101.

AMERICAN CANCER SOCIETY, INC, New York, Nov 9-11, 1977. Lane W Adams, Exec Vice-pres, 777 Third Ave, New York 10017.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, San Francisco, Nov 8-10, 1977. Arthur Auer, Exec Officer, 3900 Capital City Blvd, Lansing, Mich 48906.

AMERICAN HEART ASSOCIATION, Miami, Nov 28-Dec 2, 1977. William W Moore, Exec Officer, 7320 Greenville Ave, Dallas 75231.

AMERICAN MEDICAL ASSOCIATION, 16th Natl Conference on Physicians and Schools, Chicago, Nov 10-11, 1977. Division of Scientific Activities/Department of Health Education, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL WOMEN'S ASSOCIATION, Denver, Nov 30-Dec 4, 1977. Lorraine Loesel, Exec Officer, 1740 Broadway, New York 10019.

AMERICAN SOCIETY OF CYTOLOGY, Toronto, Nov 1-5, 1977. Warren R Lang, MD, Sec-Treas, Health Sciences Center, 130 S Ninth St, Suite 10006, Philadelphia 19107.

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES, Washington, DC, Nov 27-Dec 1, 1977. 10605 Concord St, Suite 306, Kensington, Md 20795.

■ SOUTHERN MEDICAL ASSOCIATION, Section on Ophthalmology, Dallas, Nov 6-9, 1977. William H Coles, MD, Section Sec, Dept of Ophthalmology, 80 Barre St, Charleston, SC 29401.

■ **TEXAS MEDICAL ASSOCIATION, House of Delegates, Austin, Tex, Nov 12-13, 1977. C Lincoln Williston, Exec Dir, 1801 N Lamar Bvd, Austin, Tex 78701.**

DECEMBER

■ AMERICAN ACADEMY OF DERMATOLOGY, Dallas, Dec 3-8, 1977. Bradford W Claxton, Exec Dir, 820 Davis St, Evanston, Ill 60201.

AMERICAN ASSOCIATION OF GYNECOLOGICAL LAPAROSCOPISTS, San Francisco, Dec 7-11, 1977. Jordan M Phillips, Exec Officer, 11239 S Lakewood Blvd, Downey, Calif 90241.

■ AMERICAN COLLEGE OF CHEMOSURGERY, Dallas, December 1977. GR Mikhail, MD, Sec-Treas, 2 Elmsleigh Lane, Grosse Pointe, Mich 48230.

■ AMERICAN COLLEGE OF PHYSICIANS, Texas (Northern) Regional Meeting, Dallas, Dec 1-3, 1977. Albert D Roberts, Jr, MD, FACP, UT Health Science Center, 5323 Harry Hines Blvd, Dallas 75235.

AMERICAN MEDICAL ASSOCIATION, Chicago, Dec 4-7, 1977. 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, 31st Winter Scientific Meeting, Miami, Dec 10-13, 1977, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL TENNIS ASSOCIATION, Palm Springs, Calif, Dec 7-11, 1977. WJ Drake, Exec Dir, Box 183, Alton, Ill 62002.

SOUTHERN SURGICAL ASSOCIATION, Hot Springs, Va, Dec 5-7, 1977. WR Warren, MD, Sec, Emory University Hospital, Atlanta 30322.

■ SOUTHWESTERN GYNECOLOGIC ASSEMBLY, Dallas, Dec 1-3, 1977. 3630 Noble Ave, Dallas 75204.

JANUARY

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Bal Harbour, Fla, Jan 28-Feb 3, 1978. Ms M Trueblood, Sec, 6 N Michigan Ave, Chicago 60602.

SOCIETY OF THORACIC SURGEONS, Orlando, Fla, Jan 23-25, 1978. 111 E Wacker Dr, Chicago, 60601.

SOUTHERN CLINICAL NEUROLOGICAL SOCIETY, San Juan, PR, Jan 16-20, 1978. BL Bercaw, MD, Sec-Treas, 1011 Jeffords St, Clearwater, Fla 33516.

■ **TEXAS MEDICAL ASSOCIATION, Winter Conference, Austin, Tex, Jan 20-22, 1978. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.**

■ UNITED CEREBRAL PALSY ASSOCIATION OF TEXAS, INC, Austin, Tex, Jan 14-15, 1978. San Jacinto Bldg, Suite 201, Ninth and San Jacinto, Austin, Tex 78701.

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, Phoenix, Ariz, Feb 25-Mar 1, 1978. Raymond G Slavin, MD, Exec Off, 1402 S Grand, St Louis 63104.

■ AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Dallas, Feb 23-28, 1978. Charles V Heck, MD, Exec Dir, 430 N Michigan Ave, Chicago 60611.

AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS, Key Largo, Fla, Feb 22-26, 1978. RA Straffon, MD, Sec-Treas, 2020 E 93rd St, Cleveland 44106.

AMERICAN COLLEGE OF PSYCHIATRISTS, New Orleans, Feb 8-12, 1978. JC Nemiah, MD, Admn Officer, Beth Israel Hospital, 330 Brookline Ave, Boston 02215.

■ AMERICAN COLLEGE OF SURGEONS, SOUTH TEXAS CHAPTER, Houston, Feb 2-4, 1978. Peter B Fisher, MD, Pres, 615 Medical Towers Bldg, Houston 77025.

AMERICAN GROUP PSYCHOTHERAPY ASSOCIATION, New Orleans, Feb 21-25, 1978. Ms MS Block, Exec Sec, 1995 Broadway, 14th Fl, New York 10023.

■ AMERICAN ORTHOPAEDIC FOOT SOCIETY, Dallas, Feb 22-23, 1978. RA Mann, MD, Sec, 3334 Webster St, Oakland, Calif 94609.

■ AMERICAN SOCIETY FOR SURGERY OF THE HAND, Dallas, Feb 19-24, 1978. RJ Smith, MD, Sec, Dept of Orthopaedics, Massachusetts General Hospital, Fruit St, Boston 02114.

ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL INSTRUMENTATION, Chicago, Feb 25-Mar 1, 1978. MJ Miller, JD, Exec Dir, 1901 N Ft Myer Dr, Suite 602, Arlington, Va 22209.

ASSOCIATION OF CONVALESCENT HOMES AND HOSPITALS FOR ASTHMATIC CHILDREN, Phoenix, Ariz, Feb 23-24, 1978. I Friedman, Exec Vice-pres, Spring Valley Rd, Ossining, NY 10562.

SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, Jackson, Miss, Feb 21-24, 1978. Marti Ginest, Exec Sec, 4300 N Lamar Blvd, Austin, Tex 78756.

WESTERN MEDICAL SOCIETY FOR THE STUDY OF TRAUMA, Steamboat Springs, Colo, Feb 18-25, 1978. AA Torre, MD, Sec-Treas, 3797 E Shields, Fresno, Calif 93728.

MARCH

AMERICAN COLLEGE OF CARDIOLOGY, Anaheim, Calif, Mar 6-9, 1978. William D Nelligan, CAE, Exec Officer, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS, Atlanta, Mar 29-31, 1978. 1718 Gallagher Rd, Norristown, Pa 19401.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, New Orleans, Mar 19-23, 1978. Lois Neary, Exec Officer, 1430 Tulane Ave, New Orleans 70112.

AMERICAN FERTILITY SOCIETY, New Orleans, Mar 29-Apr 1, 1978. HH Thomas, MD, Medical Dir, 1608 13th Ave S, Suite 101, Birmingham, Ala 35205.

AMERICAN PSYCHOSOMATIC SOCIETY, Washington, DC, Mar 30-Apr 1, 1978. MA Hofer, MD, Sec-Treas, 265 Nassau Rd, Roosevelt, NY 11575.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, Las Vegas, Nev, Mar 10-15, 1978. BF Alfano, MD, Exec Sec, 675 Main St, Melrose, Mass 02176.

AMERICAN SOCIETY OF REGIONAL ANESTHESIA, San Francisco, Mar 18-19, 1978. H Carron, Sec-Treas, Box 11083, Richmond, Va 23230.

ASSOCIATION FOR HOSPITAL MEDICAL EDUCATION, Atlanta, Mar 22-26, 1978. Ms GM Coleman, Admn Dir, 1911 Jefferson Davis Hwy, Suite 905, Arlington, Va 22202.

CALIFORNIA MEDICAL ASSOCIATION, San Francisco, Mar 17-22, 1978. WW Babb, Exec Dir, 731 Market St, San Francisco 94103.

INTERNATIONAL ENDORADIOTHERAPY SYMPOSIUM, Los Angeles, Mar 10-12, 1978. JA Lipsett, MD, Department of Radiology, Los Angeles County-University of Southern California Medical Center, 1200 N State St, Los Angeles 90033.

INTRAOCULAR LENS SYMPOSIUM, Los Angeles, Mar 14-18, 1978. KJ Hoffer, MD, Chmn, American Intraocular Implant Society, Box 3140, Santa Monica, Calif 90403.

Children aren't the only ones who believe in fairy tales

"And when we grow up we'll smoke low tar cigarettes and never get sick!"

It is nice to believe that low tar and nicotine cigarettes are the answer to the ominous health problems connected with smoking but chances are that if you keep smoking **any kind** of cigarette your fairy tale won't have a happy ending.

The real story is this: Some low tar, nicotine cigarettes just kill you a little slower than some other brands. Now, the Readers Digest informs us, the carbon monoxide in cigarettes may be even more deadly than the tars and nicotine. Furthermore, some low tar cigarettes are high in carbon monoxide.

Schick invested 6 million dollars studying addiction. We developed the most predictable treatment for smoking, overeating and excessive drinking. Schick's 5 day stop smoking program even offers a money back guarantee of success.

WILLPOWER ISN'T THE ANSWER

Among the thousands of facts that we have discovered in handling over 50,000 smokers case histories is that **willpower is not the main ingredient in beating the cigarette habit.** The fact is that your smoking habit lies hidden beneath your conscious level in that mysterious instinctive part of your mind that keeps you breathing even while you sleep . . . no thinking required. Schick calls it the Instinctive Memory that programs all your automatic or reflex reactions. Others call it the subconscious. Willpower is a **conscious** thing, it can not reach the subconscious.

We know that the only good solution for cigarette smokers is a stop smoking program that eliminates the **DESIRE** to smoke so there is no need for willpower. At Schick Center, we don't teach willpower. We take away the need for it. You can call us anytime but why not call now.

SCHICK CENTERS FOR THE CONTROL OF SMOKING

In Dallas Call 243-0400 In Fort Worth Call 731-4291 In Houston Call 629-1100

In El Paso Call 779-7222 In Corpus Christi Call 855-3045

Thiazides and hypertension

A balancing act: Blood pressure reduction vs potassium depletion

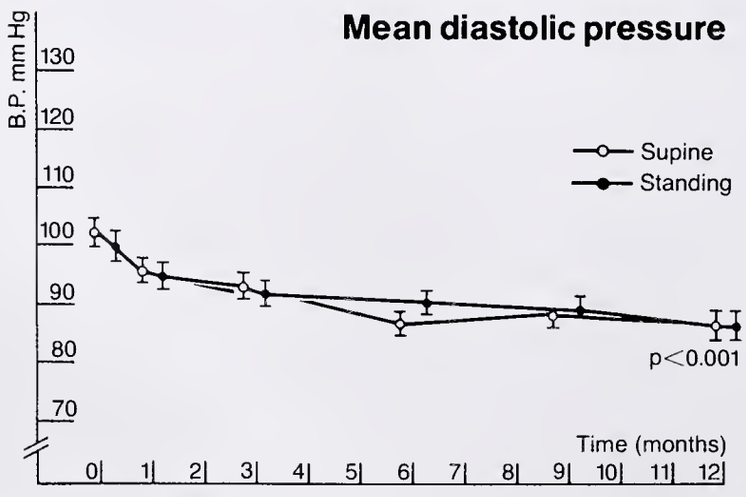
From a 1-year study of 18 patients with mild uncomplicated hypertension published in The Lancet*

Once a day

Naturetin®

Bendro-
flumethiazide
Tablets N.F.

Diastolic blood pressure down 12-15%



"The mean pretreatment blood pressure was 170/103 mm Hg (supine) and 166/100 mm Hg (standing). Diastolic pressure continued to fall over the first 6 months and then there was no further change up to 1 year...The mean blood pressure at 12 months was 153/88 mm Hg (supine) and 142/88 mm Hg (standing)."

"The patients were receiving a single daily dose of 10 mg bendrofluazide [bendroflumethiazide]...there were no apparent side effects from the medication."

*Wilkinson PR et al: The Lancet 1:759-762, 1975.

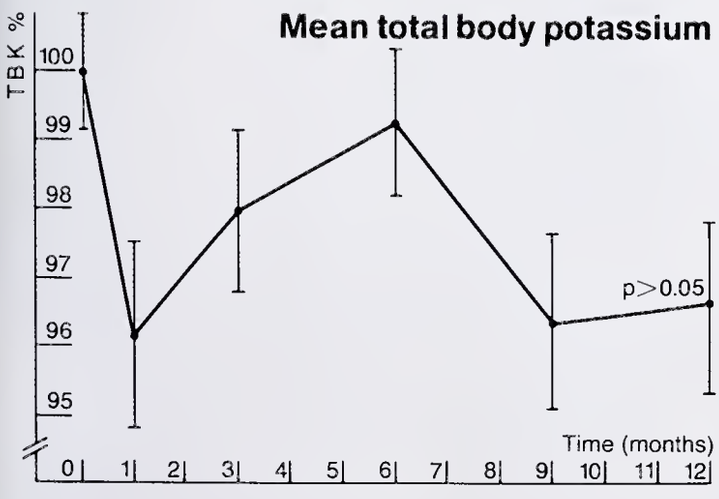
Once a day

Naturetin®

Bendro-
flumethiazide
Tablets B.P.

2.5, 5 and 10 mg

Potassium stabilized at 96% mean TBK



"The amount of potassium loss during the period of study did not seem to be clinically significant."

"A serum potassium of less than 3.5 mmol per litre is often taken as the value below which potassium supplements should be given...At an arbitrary lower value for serum potassium of 3.0 mmol per litre, few patients, our data suggest, would need potassium supplements. Our findings with TBK support this view..."

See next page for full prescribing information.

Once a day
Naturetin®
Bendroflumethiazide Tablets N.F.

NATURETIN®-2.5
NATURETIN®-5
NATURETIN®-10
Bendroflumethiazide Tablets N.F.

DESCRIPTION

Naturetin (Bendroflumethiazide Tablets N.F.) is a benzothiadiazine derivative containing a benzyl and a trifluoromethyl group. It is a potent oral diuretic and antihypertensive agent available as compressed tablets providing 2.5, 5.0, or 10 mg. bendroflumethiazide.

ACTIONS

The mechanism of action results in an interference with the renal tubular mechanism of electrolyte reabsorption. At maximal therapeutic dosage all thiazides are approximately equal in their diuretic potency. The mechanism whereby thiazides function in the control of hypertension is unknown.

INDICATIONS

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated as adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis and corticosteroid and estrogen therapy.

Bendroflumethiazide has also been found useful in edema due to various forms of renal dysfunction such as: nephrotic syndrome, acute glomerulonephritis, and chronic renal failure.

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated in the management of hypertension either as the sole therapeutic agent or to enhance the effectiveness of other antihypertensive drugs in the more severe forms of hypertension.

Usage in Pregnancy. The routine use of diuretics in an otherwise healthy woman is inappropriate and exposes mother and fetus to unnecessary hazard. Diuretics do not prevent development of toxemia of pregnancy, and there is no satisfactory evidence that they are useful in the treatment of developed toxemia.

Edema during pregnancy may arise from pathological causes or from the physiologic and mechanical consequences of pregnancy. Thiazides are indicated in pregnancy when edema is due to pathologic causes, just as they are in the absence of pregnancy (see WARNINGS). Dependent edema in pregnancy, resulting from restriction of venous return by the expanded uterus, is properly treated through elevation of the lower extremities and use of support hose; use of diuretics to lower intravascular volume in this case is illogical and unnecessary. There is hypervolemia during normal pregnancy which is harmful to neither the fetus nor the mother (in the absence of cardiovascular disease), but which is associated with edema, including generalized edema, in the majority of pregnant women. If this edema produces discomfort, increased recumbency will often provide relief. In rare instances, this edema may cause extreme discomfort which is not relieved by rest. In these cases, a short course of diuretics may provide relief and may be appropriate.

CONTRAINDICATIONS

Bendroflumethiazide is contraindicated in anuria.

It is also contraindicated in patients who have previously demonstrated hypersensitivity to it or other sulfonamide-derived drugs.

WARNINGS

Bendroflumethiazide should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may be additive or may potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

Usage in Pregnancy. Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers. Thiazides appear in breast milk. If use of the drug is deemed essential, the patient should stop nursing.

PRECAUTIONS

Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: dryness of the mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Latent diabetes mellitus may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use. If emergency surgery is indicated, preanesthetic and anesthetic agents should be administered in reduced dosage.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS

Gastrointestinal System: anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), and pancreatitis. *Central Nervous System:* dizziness, vertigo, paresthesia, headache, and xanthopsia. *Hematologic:* leukopenia, agranulocytosis, thrombocytopenia, and aplastic anemia. *Dermatologic-Hypersensitivity:* purpura, photosensitivity, rash, urticaria, and necrotizing angiitis (vasculitis, cutaneous vasculitis). *Cardiovascular:* orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates or narcotics. *Other:* hyperglycemia, glycosuria, occasional metabolic acidosis in diabetic patients, hyperuricemia, allergic glomerulonephritis, muscle spasm, weakness, and restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION

Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

Diuretic: The usual dose is 5 mg. once daily, preferably given in the morning. To initiate therapy, doses up to 20 mg. may be given once daily or divided into two doses. A single daily dose of 2.5 to 5 mg. should suffice for maintenance.

Alternatively, intermittent therapy may be advantageous in many patients. By administering the preparation every other day or on a three to five day per week schedule, electrolyte imbalance is less likely to occur; however, the possibility still exists.

In general, the lowest dosage that achieves the therapeutic response should be employed.

Antihypertensive: The suggested initial dosage is 5 to 20 mg. daily. Maintenance dosage may range from 2.5 to 15 mg. per day, depending on the individual response of the patient. When the diuretic is used with other antihypertensive agents, lower maintenance doses for each drug are usually sufficient.

STORAGE

Store at room temperature; avoid excessive heat.

HOW SUPPLIED

2.5 mg. tablets in bottles of 100, 5 mg. tablets (scored) in bottles of 100 and 1000, and 10 mg. tablets (scored) in bottles of 100.

SQUIBB®

©1977 E.R. Squibb & Sons, Inc. 477-501

Thiazides and hypertension

A balancing act: Blood pressure reduction vs potassium depletion

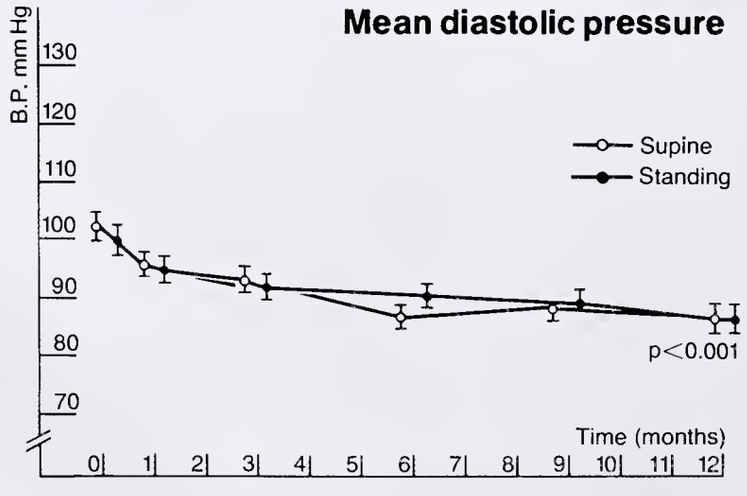
From a 1-year study of 18 patients with mild uncomplicated hypertension published in The Lancet*

Once a day

Naturetin®

Bendro-
flumethiazide
Tablets N.F.

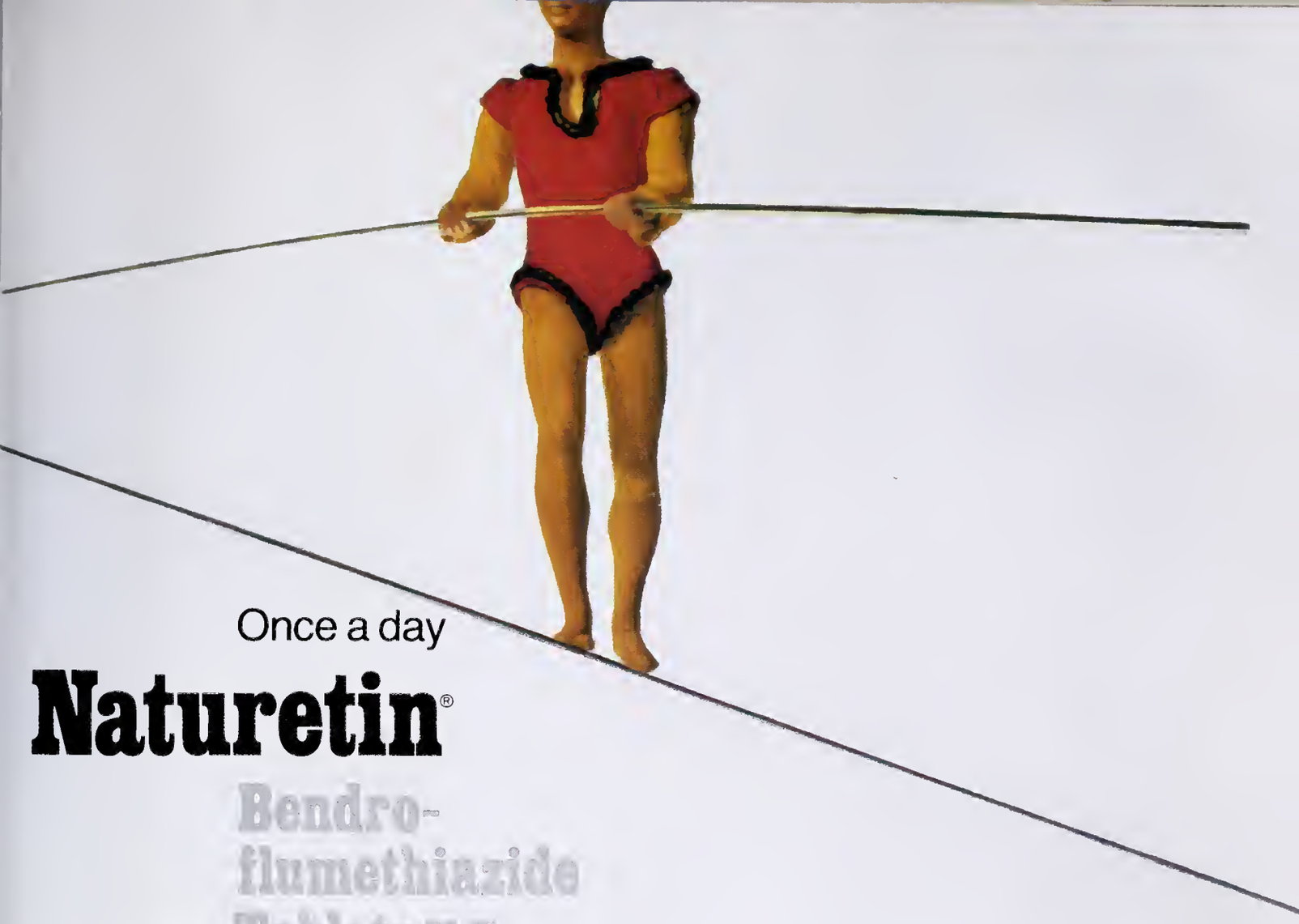
Diastolic blood pressure down 12-15%



"The mean pretreatment blood pressure was 170/103 mmHg (supine) and 166/100 mmHg (standing). Diastolic pressure continued to fall over the first 6 months and then there was no further change up to 1 year...The mean blood pressure at 12 months was 153/88 mmHg (supine) and 142/88 mmHg (standing)."

"The patients were receiving a single daily dose of 10 mg bendrofluazide [bendroflumethiazide]...there were no apparent side effects from the medication."

*Wilkinson PR et al: The Lancet 1:759-762, 1975.



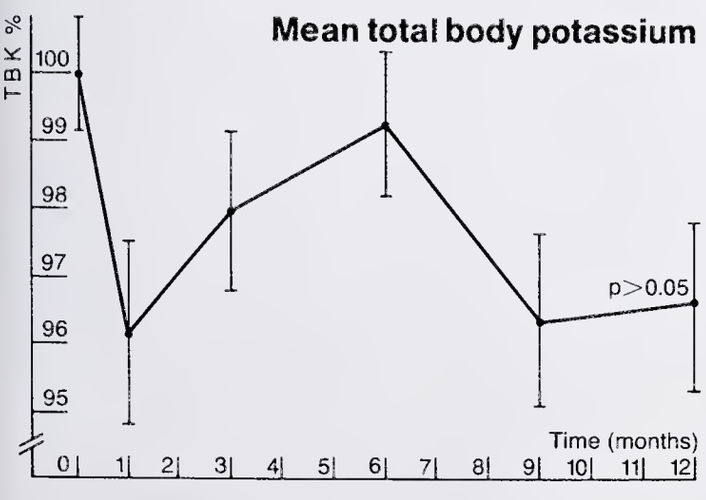
Once a day

Naturetin®

Bendro-
flumethiazide
Tablets N.F.

2.5, 5 and 10 mg

Potassium stabilized at 96% mean TBK



"The amount of potassium loss during the period of study did not seem to be clinically significant."

"A serum potassium of less than 3.5mmol per litre is often taken as the value below which potassium supplements should be given...At an arbitrary lower value for serum potassium of 3.0mmol per litre, few patients, our data suggest, would need potassium supplements. Our findings with TBK support this view..."

See next page for full prescribing information.

Once a day Naturetin®

Bendroflumethiazide Tablets N.F.

NATURETIN®-2.5
NATURETIN®-5
NATURETIN®-10
Bendroflumethiazide Tablets N.F.

DESCRIPTION

Naturetin (Bendroflumethiazide Tablets N.F.) is a benzothiadiazine derivative containing a benzyl and a trifluoromethyl group. It is a potent oral diuretic and antihypertensive agent available as compressed tablets providing 2.5, 5.0, or 10 mg. bendroflumethiazide.

ACTIONS

The mechanism of action results in an interference with the renal tubular mechanism of electrolyte reabsorption. At maximal therapeutic dosage all thiazides are approximately equal in their diuretic potency. The mechanism whereby thiazides function in the control of hypertension is unknown.

INDICATIONS

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated as adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis and corticosteroid and estrogen therapy.

Bendroflumethiazide has also been found useful in edema due to various forms of renal dysfunction such as: nephrotic syndrome, acute glomerulonephritis, and chronic renal failure.

Naturetin (Bendroflumethiazide Tablets N.F.) is indicated in the management of hypertension either as the sole therapeutic agent or to enhance the effectiveness of other antihypertensive drugs in the more severe forms of hypertension.

Usage in Pregnancy. The routine use of diuretics in an otherwise healthy woman is inappropriate and exposes mother and fetus to unnecessary hazard. Diuretics do not prevent development of toxemia of pregnancy, and there is no satisfactory evidence that they are useful in the treatment of developed toxemia.

Edema during pregnancy may arise from pathological causes or from the physiologic and mechanical consequences of pregnancy. Thiazides are indicated in pregnancy when edema is due to pathologic causes, just as they are in the absence of pregnancy (see WARNINGS). Dependent edema in pregnancy, resulting from restriction of venous return by the expanded uterus, is properly treated through elevation of the lower extremities and use of support hose; use of diuretics to lower intravascular volume in this case is illogical and unnecessary. There is hypervolemia during normal pregnancy which is harmful to neither the fetus nor the mother (in the absence of cardiovascular disease), but which is associated with edema, including generalized edema, in the majority of pregnant women. If this edema produces discomfort, increased recumbency will often provide relief. In rare instances, this edema may cause extreme discomfort which is not relieved by rest. In these cases, a short course of diuretics may provide relief and may be appropriate.

CONTRAINDICATIONS

Bendroflumethiazide is contraindicated in anuria.

It is also contraindicated in patients who have previously demonstrated hypersensitivity to it or other sulfonamide-derived drugs.

WARNINGS

Bendroflumethiazide should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may be additive or may potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

Usage in Pregnancy. Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnant women requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing Mothers. Thiazides appear in breast milk. If use of the drug is deemed essential, the patient should stop nursing.

PRECAUTIONS

Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: dryness of the mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Latent diabetes mellitus may become manifest during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use. If emergency surgery is indicated, preanesthetic and anesthetic agents should be administered in reduced dosage.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS

Gastrointestinal System: anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), and pancreatitis. *Central Nervous System:* dizziness, vertigo, paresthesia, headache, and xanthopsia. *Hematologic:* leukopenia, agranulocytosis, thrombocytopenia, and aplastic anemia. *Dermatologic-Hypersensitivity:* purpura, photosensitivity, rash, urticaria, and necrotizing angiitis (vasculitis, cutaneous vasculitis). *Cardiovascular:* orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates or narcotics. *Other:* hyperglycemia, glycosuria, occasional metabolic acidosis in diabetic patients, hyperuricemia, allergic glomerulonephritis, muscle spasm, weakness, and restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION

Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

Diuretic: The usual dose is 5 mg. once daily, preferably given in the morning. To initiate therapy, doses up to 20 mg. may be given once daily or divided into two doses. A single daily dose of 2.5 to 5 mg. should suffice for maintenance.

Alternatively, intermittent therapy may be advantageous in many patients. By administering the preparation every other day or on a three to five day per week schedule, electrolyte imbalance is less likely to occur; however, the possibility still exists.

In general, the lowest dosage that achieves the therapeutic response should be employed.

Antihypertensive: The suggested initial dosage is 5 to 20 mg. daily. Maintenance dosage may range from 2.5 to 15 mg. per day, depending on the individual response of the patient. When the diuretic is used with other antihypertensive agents, lower maintenance doses for each drug are usually sufficient.

STORAGE

Store at room temperature; avoid excessive heat.

HOW SUPPLIED

2.5 mg. tablets in bottles of 100, 5 mg. tablets (scored) in bottles of 100 and 1000, and 10 mg. tablets (scored) in bottles of 100.

SQUIBB®

©1977 E.R. Squibb & Sons, Inc. 477-501

CONTINUING EDUCATION COURSES

OCTOBER

Arthritis & Rheumatism

Title: Arthritic and Rheumatic Disorders
Sponsors: Department of Internal Medicine, Department of Orthopedic Surgery, Department of Physical Medicine, Baylor University Medical Center, Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: Beasley Auditorium, Baylor University Medical Center, Dallas
Dates: Oct 27-28, 1977
Fee: Practicing physicians, $50; Nurses, physical therapists, occupational therapists, $10; Medical students, house staff, No fee
Credit: 14 hours, AMA Physician's Recognition Award
Contact: Carolyn Saunders, A. Webb Roberts Center for Continuing Education, 3500 Gaston Ave, Dallas 75246

Emergency Care

Title: Trauma '77
Sponsor: UT Medical Branch, Galveston
Location of Course: Galvez Hotel, Galveston
Dates: Oct 12-15, 1977
Duration: 8 am-5 pm, Thursday-Saturday
Fee: $80
Designed For: Specialists; General practitioners
Enrollment: Minimum, 75; Maximum, 125
Credit: 20 hours AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: NeKee McNulty, Assistant to the Director, Continuing Education Division, UT Medical Branch, John Sealy Hospital, 8th Floor, Galveston 77550

Title: The Injured Patient
Sponsor: UT Health Science Center at Houston
Dates: Oct 31-Dec 12, 1977
Duration: Intermittent; 2 hours each Monday; 7-9 pm; 6 weeks; 12 total course hours
Fee: To be announced
Designed For: General practitioners
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Family Medicine

Title: Infectious Disease for the Primary Care Physician
Sponsor: Continuing Education Division, UT Medical Branch, Galveston
Location of Course: Galvez Hotel, Galveston
Dates: Oct 27-29, 1977
Fee: $80
Credit: 20 hours, Category 1, AMA Physician's Recognition Award
Contact: NeKee McNulty, Assistant to the Director, Continuing Education Division, UT Medical Branch, John Sealy Hospital, 8th Floor, Galveston 77550

Title: Review Course in Family Practice
Sponsor: Baylor College of Medicine, Houston
Location of Course: Marriott Motel, Houston
Dates: Oct 5-8, 1977
Fee: To be announced
Designed For: General practitioners; Specialists in Family Medicine
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Obstetrics & Gynecology

Title: What's New and Important in Ob-Gyn
Sponsors: Department of Obstetrics & Gynecology, UT Health Science Center at Dallas, Southwestern Medical School; Parkland Memorial Hospital, Dallas; A. Webb Roberts Center for Continuing Education, Dallas
Location of Course: UT Health Science Center at Dallas
Dates: Oct 11-15, 1977
Duration: Continuous; 5 days
Designed For: Specialists in Obstetrics & Gynecology
Credit: American College of Obstetricians and Gynecologists; 40 hours, Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, seminar
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Radiology & Radioisotopes

Title: Seminar with Specialists in Radiology
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Oct 27-28, 1977
Duration: Continuous; 2 days; 12 total course hours
Fee: $225
Designed For: Specialists in Radiology
Enrollment: Minimum, 21; Maximum, 45
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Title: Neuroradiology and CT Scanning for the Practicing Radiologist
Sponsors: Neuroradiology Division, Department of Radiology, UT Southwestern Medical School, UT Health Science Center at Dallas; Parkland Memorial Hospital, Dallas; A. Webb Roberts Center for Continuing Education, Dallas
Location of Course: Fairmont Hotel, Dallas
Dates: Oct 21-23, 1977
Fee: $200; Residents and Fellows, $100
Credit: 18 hours, Category 1, AMA Physician's Recognition Award
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Surgery

Title: Soft Tissue Surgery Workshop
Sponsors: Division of Otolaryngology, UT Health Science Center at Dallas; UT Medical Branch, Galveston; UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at Dallas
Dates: Oct 7-9, 1977
Fee: Practicing physicians, $185; Residents, $110
Credit: 22 hours, Category 1, AMA Physician's Recognition Award
Teaching Methods: Laboratory work, lecture
Contact: Jack P. Gunter, MD, Course Coordinator, Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Other

Title: Seminar on Negotiations
Sponsor: American Medical Association, Chicago
Location of Course: Atlanta, Ga
Dates: Oct 15-17, 1977
Fee: AMA member, medical society staff member, $200; Nonmember, $275
Credit: 22 hours, Category 2, AMA Physician's Recognition Award
Contact: AMA Department of Negotiations, 535 N Dearborn St, Chicago 60610

NOVEMBER

Anesthesiology

Title: Anesthesia in Emergency Surgery
Sponsors: UT Health Science Center at Dallas; A. Webb Roberts Center for Continuing Education, Dallas
Location of Course: UT Health Science Center at Dallas
Date: Nov 4, 1977
Duration: 1 day
Designed For: General practitioners; Specialists in Anesthesiology, Surgery
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, patient demonstration, seminar
Contact: June Bovill, Assistant to Associate Dean for Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Title: Anesthesia and Surgery of the Aorta and Great Vessels
Sponsor: Department of Anesthesiology, Baylor College of Medicine
Location of Course: Marriott Motor Hotel, Houston
Dates: Nov 10-11, 1977
Contact: Dean H. Morrow, MD, Professor of Anesthesiology, Baylor College of Medicine, Texas Medical Center, Houston 77030

Basic Sciences: Microbiology & Immunology

Title: A Review of Clinical Microbiology
Sponsors: Department of Pathology, Baylor University Medical Center, Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: Ramada Inn, Dallas
Dates: Nov 7-11, 1977
Fee: $175
Credit: 39 hours, AMA Physician's Recognition Award
Contact: Carolyn Saunders, A. Webb Roberts Center for Continuing Education, 3500 Gaston Ave, Dallas 75246

Title: Fourth Annual Texas Medical Center Symposium on Infectious Disease and Microbiology: What's New with Antibiotics
Sponsors: UT Health Science Center at Houston; Baylor College of Medicine; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute, Houston; Houston Association of Medical Microbiologists
Location of Course: Texas Medical Center, Houston
Date: Nov 19, 1977
Contact: UT Health Science Center at Houston, Box 20367, Houston 77025

Malignant Disease

Title: Immunotherapy of Human Cancer
Sponsors: UT Health Science Center at Houston; M.D. Anderson Hospital and Tumor Institute, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Nov 10-11, 1977
Duration: Continuous; 8 am-5 pm; 11 total course hours
Fee: $45
Designed For: General practitioners; Specialists
Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, lecture, open question, panel
Contact: George R. Blumenschein, MD, Associate Director of Education, M.D. Anderson Hospital and Tumor Institute, Texas Medical Center, Houston 77030 or

Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77030

Title: Pathology Review—Immunotherapy of Human Cancer
Sponsors: UT Health Science Center at Houston; M.D. Anderson Hospital and Tumor Institute, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Date: Nov 12, 1977
Duration: Continuous; 8 am-12 pm
Designed For: General practitioners; Specialists
Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, open question, panel
Contact: George R. Blumenschein, MD, Associate Director of Education, M.D. Anderson Hospital and Tumor Institute, Texas Medical Center, Houston 77030 or Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77030

Metabolism

Title: Metabolic Aspects of Critically Ill Patients
Sponsors: American Medical Association, Chicago; UT Health Science Center at Houston
Location of Course: Hilton Palacio del Rio, San Antonio
Dates: Nov 17-18, 1977
Fee: $30
Credit: 13 hours, Category 1, AMA Physician's Recognition Award
Contact: Mrs M. Nagy, AMA Department of Foods and Nutrition, 535 N Dearborn St, Chicago 60610

Ophthalmology

Title: Symposium on Strabismus
Sponsors: Department of Ophthalmology, Baylor College of Medicine; Texas Ophthalmological Association
Location of Course: Houston Marriott Hotel, Houston
Dates: Nov 18-19, 1977
Fees: Texas Ophthalmological Association members, No fee; Nonmembers, $100; Residents, $25
Credit: 11½ hours, Category 1, AMA Physician's Recognition Award
Contact: Baylor-TOA Strabismus Course, Texas Children's Hospital, Department of Ophthalmology, Houston 77030

Psychiatry

Title: Eleventh Annual Symposium: The Kinetics of Psychiatric Drugs
Sponsor: Texas Research Institute of Mental Sciences, Houston
Location of Course: Houston
Dates: Nov 28-30, 1977
Contact: Joseph C. Schoolar, PhD, MD, or James L. Claghorn, MD, 1300 Moursund, Houston 77030

Urology

Title: Urology '77
Sponsor: Continuing Education Division, UT Medical Branch, Galveston
Location of Course: Galvez Hotel, Galveston
Dates: Nov 9-12, 1977
Duration: Continuous, 3 days, 20 total course hours
Designed For: Specialists; General practitioners
Fee: $80
Enrollment: Minimum, 75; Maximum, 125
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: NeKee McNulty, Assistant Director, Continuing Education Division, UT Medical Branch, Galveston 77550

Other

Title: Regional Workshop on Quality Assurance
Sponsor: Commission on Professional and Hospital Activities, Ann Arbor, Mich
Location of Course: Gunter Hotel, San Antonio
Dates: Nov 2-3, 1977
Designed For: Hospital administrators, hospital trustees, health record analysts, utilization review coordinators, medical record practitioners, other health care professionals, physicians interested in administrative functions
Fee: $85
Credit: 6 hours, AAFP Elective; Category 1, AMA Physician's Recognition Award
Contact: Commission on Professional and Hospital Activities, 1968 Green Rd, Ann Arbor, Mich 48105

Title: Hospital Medical Staff Leadership Workshop
Sponsor: American Medical Association, Chicago
Location of Course: Marriott Motor Inn (Downtown), Dallas
Dates: Nov 4-5, 1977
Fee: AMA member, Medical society staff, $150; Nonmember, $200
Credit: Category 1, AMA Physician's Recognition Award
Contact: AMA, Department of Hospitals and Health Facilities, 535 N Dearborn St, Chicago 60610

All oral bronchodilators are pretty much the same. Right? Wrong!

The difference is in their action—both before and after symptoms begin. That's the reason for TEDRAL®.

- □ effective and prolonged bronchodilation from the synergistic effect of ephedrine and theophylline
- □ β-ADRENERGIC ACTION RELAXES BRONCHIAL SMOOTH MUSCLE
- □ α-ADRENERGIC ACTION REDUCES BRONCHIAL EDEMA AND SECRETIONS
- □ dosage forms to meet individual patient needs

For proven performance...

Tedral® / Tedral® SA / Tedral® Elixir

Each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer), 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer), and 25 mg phenobarbital in the immediate release layer.

SUSTAINED ACTION

Each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine HCl, and 2 mg phenobarbital, the alcohol content is 15%.

See next page for brief summary.

WARNER/CHILCOTT
Division, Warner-Lambert Company
Morris Plains, New Jersey 07950
T-GP-72-B/W

TEDRAL®

TEDRAL® SA Sustained Action

TEDRAL® Elixir

CAUTION: Federal law prohibits dispensing Tedral SA without prescription.

Description. Tedral: each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Tedral SA: each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer); 25 mg phenobarbital in the immediate release layer.

Tedral Elixir: each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine hydrochloride, and 2 mg phenobarbital; the alcohol content is 15%.

Indications. Tedral, Tedral SA, and Tedral Elixir are indicated for the symptomatic relief of bronchial asthma, asthmatic bronchitis, and other bronchospastic disorders. They may also be used prophylactically to abort or minimize asthmatic attacks and are of value in managing occasional, seasonal or perennial asthma.

Tedral SA (Sustained Action) offers the convenience of b.i.d. dosage.

Tedral Elixir is convenient for persons who may have difficulty in swallowing tablets.

These Tedral formulations are adjuncts in the total management of the asthmatic patient. Acute or severe asthmatic attacks may necessitate supplemental therapy with other drugs by inhalation or other parenteral routes.

Contraindications. Sensitivity to any of the ingredients; porphyria.

Warnings. Drowsiness may occur. PHENOBARBITAL MAY BE HABIT-FORMING.

Precautions. Use with caution in the presence of cardiovascular disease, severe hypertension, hyperthyroidism, prostatic hypertrophy, or glaucoma.

Adverse Reactions. Mild epigastric distress, palpitation, tremulousness, insomnia, difficulty of micturition, and CNS stimulation have been reported.

Average Dosage. *Prophylactic or Therapeutic.*

Tedral: *Adults*—One or two tablets every 4 hours. *Children*—(Over 60 lb) one-half the adult dose.

Tedral SA: *Adults*—One tablet on arising and one tablet 12 hours later. Tablets should not be chewed. *Children*—Not established for children under 12.

Tedral Elixir: Note: One teaspoonful is equivalent to *one-quarter* Tedral tablet. *Children*—One teaspoonful per 30 lb body weight, every 4-6 hours, unless prescribed otherwise by physician. Should be given to children under 2 years of age only with extreme caution. *Adults*—One to two tablespoonfuls every four hours.

Supplied. Tedral: White, uncoated scored tablets in bottles of 24 (N 0047-0230-24), 100 (N 0047-0230-51) and 1000 (N 0047-0230-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0230-11).

Tedral SA: Double-layered, uncoated, coral/mottled white tablets in bottles of 100 (N 0047-0231-51) and 1000 (N 0047-0231-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0231-11).

Tedral Elixir: Dark red and cherry-flavored in 474 ml (16 fl oz) bottles (N 0047-0242-16).

STORE BETWEEN 59° and 86°F (15° and 30°C).

Full information is available on request.

The American Society for Dermatological Surgery
and
The American Academy of Facial Plastic and Reconstructive Surgery, Inc.

ANNOUNCE THE INTERNATIONAL

HAIR TRANSPLANT SYMPOSIUM

to be held in

LUCERNE, SWITZERLAND

FEBRUARY 1st - 6th, 1978

Multi-discipline International faculty including: Dermatologists, otolaryngologists, regional and general plastic surgeons.

FEE: $290

SPECIAL ECONOMY TRAVEL PACKAGE: $685

For further information contact:
D. B. Stough, III, M.D. - Program Director
The Stough Dermatology and Cutaneous Surgery Clinic, P.A.
Doctors Park
Hot Springs, Arkansas 71901

Taos Medical Symposium

Announcing the Fifth Annual Symposium
February 14-18, 1978 Taos, New Mexico
14 hours CME credit applied for from AAFP and AMA
Topics covering:
Cardiology (4 hrs.) G.I. Problems (4 hrs.)
Rheumatology (4 hrs.) Dermatology (2 hrs.)

Additional activities with special four-day group rates scheduled at Taos Ski Valley.

Advance registration required. Registration fee of $100.00 includes continental breakfast for two each morning, transfers each day to and from the ski area, cross country ski trips, tours of local museums and art galleries, and hosted receptions. Registration deadline January 31, 1978. Limited to 100 participants.

For further information contact:
Albuquerque & Bernalillo County Medical Association
2650 Yale Blvd., SE Suite 103
Albuquerque, New Mexico 87106
Phone (505) 247-3711

Important Issues on Cassette Tape

TMA's 1977 Conference on Medical Service featured important information on new laws and issues affecting your practice. Now the conference is on tape. Order your full-length audio cassettes of each presentation given a the conference. Tapes are $5 apiece or $18 for the complete set. Don't delay. Order your tapes today. Here's what you'll get:

Tape A. **Texas Professional Liability** panel (75 minutes) includes:

- The Spectre of Countersuits
- Possible TMA Sponsored Self-insurance Trust, Risk Control Programs, etc.
- Possible Impact of HB 1048 on Premiums
- Communicating With and Informing Patients
- Major Provisions of HB 1048.

Tape B. panel on **New State Laws Affecting Physicians** (75 minutes) includes:

- Clinical Lab Service Billing (HB 1309)
- Natural Death Act
- Licensing for Allied Health Professions
- Medical Education Legislation
- Drug, Optometric and Other Bills.

Tape C. two speeches (30 minutes each) on:

- **"Health Issues before Congress"** U.S. Rep. Robert Krueger of Texas;
- **"The Consumer Movement; Pressures on Physicians' Fees an Hospital Charges"** by Kenneth Platt M.D., Colorado Foundation for Medic Care.

Tape D. two speeches (30 minutes each) on:

- **"Challenges for Physicians and th Profession"** by Tom Nesbitt, M.D., AMA president-elect;
- **"Overview of Medicine's Socioeco nomic Problems"** by Ralph Emerso M.D., president of Conference of Presidents and State Medical Societ Officers.

TAPE ORDER FORM

Please send me _____ (No.) copies of the entire set of tapes at $18 per set.

Please send me the selections noted below at $5 apiece:

_____ (No.) Tape A; _____ (No.) Tape B; _____ (No.) Tape C; _____ (No.) Tape D.

Total tapes: _____
Total $$: _____
Check enclosed: _____
Bill me: _____

Please Print: _____ (name)

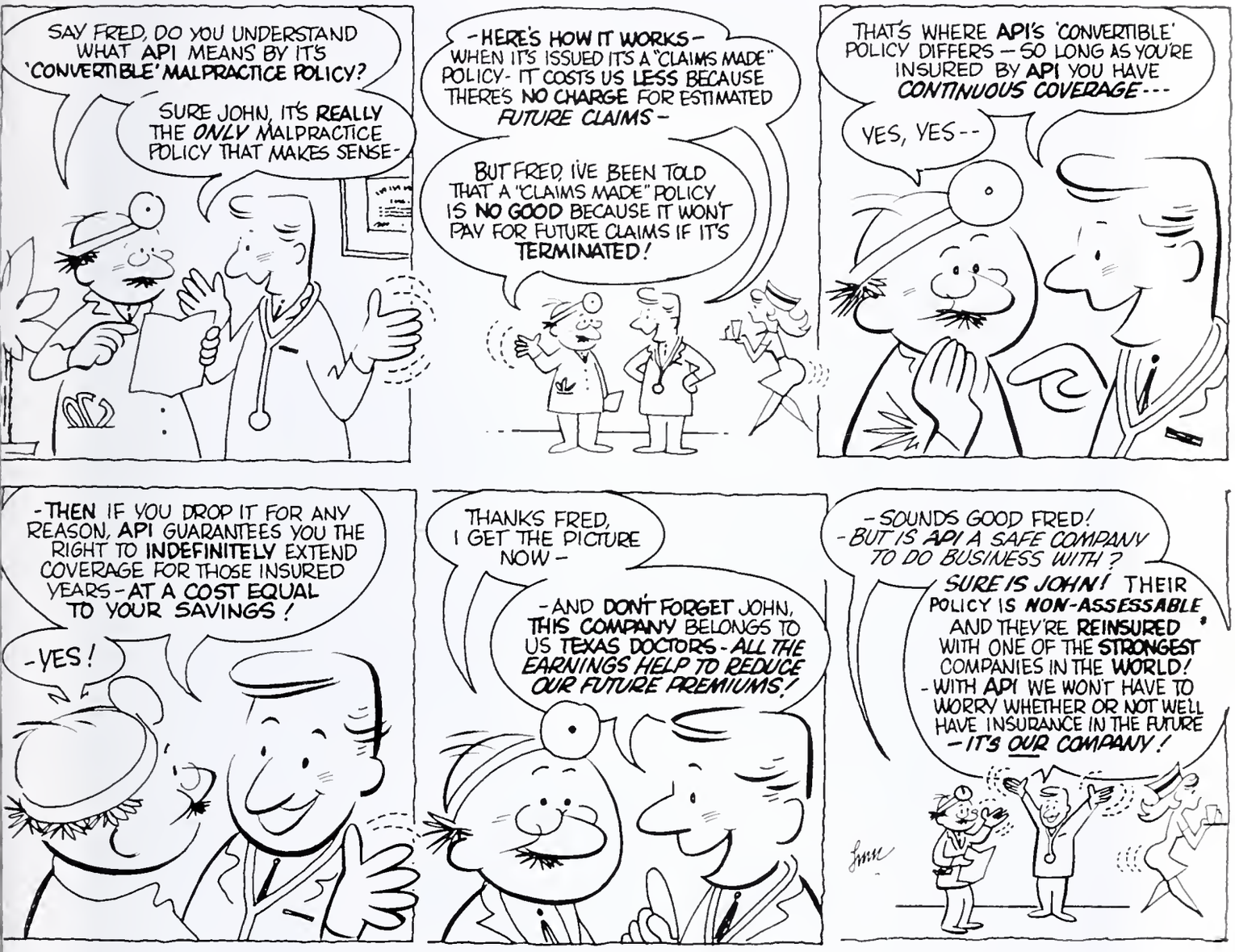
_____ (address)

_____ (city, state)

Send to: Communication Dept. TMA, 1801 N. Lamar, Austin, Tex. 78701.

MALPRACTICE INSURANCE ...

... API's CONVERTIBLE, NON-ASSESSABLE POLICY IS THE BEST!


SAY FRED, DO YOU UNDERSTAND WHAT API MEANS BY IT'S 'CONVERTIBLE' MALPRACTICE POLICY?
SURE JOHN, IT'S REALLY THE ONLY MALPRACTICE POLICY THAT MAKES SENSE-
-HERE'S HOW IT WORKS- WHEN IT'S ISSUED IT'S A "CLAIMS MADE" POLICY- IT COSTS US LESS BECAUSE THERE'S NO CHARGE FOR ESTIMATED FUTURE CLAIMS-
BUT FRED, I'VE BEEN TOLD THAT A "CLAIMS MADE" POLICY IS NO GOOD BECAUSE IT WON'T PAY FOR FUTURE CLAIMS IF IT'S TERMINATED!
THAT'S WHERE API'S 'CONVERTIBLE' POLICY DIFFERS - SO LONG AS YOU'RE INSURED BY API YOU HAVE CONTINUOUS COVERAGE---
YES, YES--
-THEN IF YOU DROP IT FOR ANY REASON, API GUARANTEES YOU THE RIGHT TO INDEFINITELY EXTEND COVERAGE FOR THOSE INSURED YEARS - AT A COST EQUAL TO YOUR SAVINGS!
-YES!
THANKS FRED, I GET THE PICTURE NOW-
-AND DON'T FORGET JOHN, THIS COMPANY BELONGS TO US TEXAS DOCTORS - ALL THE EARNINGS HELP TO REDUCE OUR FUTURE PREMIUMS!
-SOUNDS GOOD FRED! -BUT IS API A SAFE COMPANY TO DO BUSINESS WITH?
SURE IS JOHN! THEIR POLICY IS NON-ASSESSABLE AND THEY'RE REINSURED WITH ONE OF THE STRONGEST COMPANIES IN THE WORLD! - WITH API WE WON'T HAVE TO WORRY WHETHER OR NOT WE'LL HAVE INSURANCE IN THE FUTURE -IT'S OUR COMPANY!

And that's not all. You'll have the advantage of a peer review group to screen out claim-prone applicants and provide claim review with defendant doctor and attorney. You'll get legal representation by a nationally recognized law firm with a history of successful, tough defense of malpractice suits.

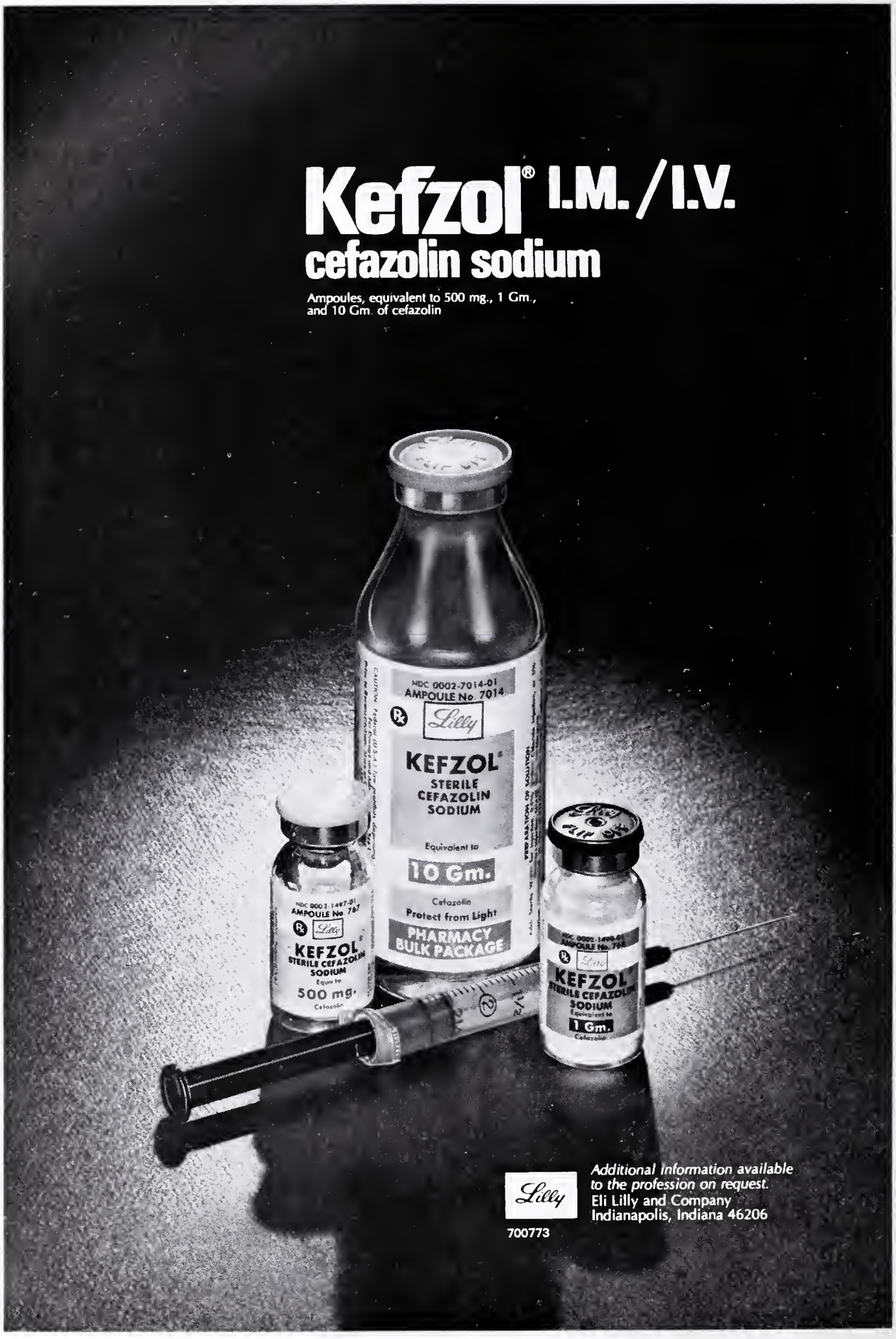
API has grown to $1,000,000 in policyholders surplus — net worth.

Doctor, find out how to join your colleagues who have learned the way out of the professional liability dilemma. Call or write today!

AMERICAN PHYSICIANS INSURANCE EXCHANGE

1400 FRITO-LAY TOWER • DALLAS, TEXAS 75235 • PHONE: (214) 350-6661

API is reinsured by one of America's largest reinsurance groups — rated A+XV by A.M. Best. (The highest rating available).


Kefzol® I.M./I.V.
cefazolin sodium
Ampoules, equivalent to 500 mg., 1 Gm.,
and 10 Gm. of cefazolin
NDC 0002-7014-01
AMPOULE No. 7014
KEFZOL®
STERILE
CEFAZOLIN
SODIUM
Equivalent to
10 Gm.
Cefazolin
Protect from Light
PHARMACY
BULK PACKAGE
KEFZOL
STERILE CEFAZOLIN
SODIUM
500 mg.
KEFZOL
STERILE CEFAZOLIN
SODIUM
1 Gm.
Additional information available
to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206
700773

Disturbed sleep as a function of sleep apnea: too much sleep but not enough

Ismet Karacan, MD, (Med) DSc; Catesby Ware, PhD; Constance A. Moore, BA; Baris Dervent, MD; Robert L. Williams, MD

Sleep-induced apnea, a newly recognized respiratory syndrome, is estimated to affect more than 2 million people in the United States. Although this disorder can be diagnosed easily and treated effectively, it usually remains undiagnosed or is misdiagnosed. The patient may or may not be aware of his sleep disturbance, but in spite of longer nocturnal sleep or diurnal sleep periods, or both, he feels tired. Sleep apnea can seriously affect the patient's social life and career, and it can contribute to cardiopulmonary dysfunction. Differentiation between sleep apnea and other sleep disorders is crucial because treatment of sleep apnea with hypnotic drugs is ineffective and can be fatal.

Recent research in our laboratory and other sleep disorders centers has provided information on a type of respiratory dysfunction which is diagnosable only during sleep. Though the true prevalence is unknown, sleep apnea (the periodic cessation of respiration during sleep) is now thought to be a frequent problem of patients who complain of excessive daytime sleepiness (EDS) but who do not have cataplexy.[1] Karacan and associates[2] found in a survey of an urban Florida community that more than one-third of the respondents complained of a sleep disturbance; and Kales and associates reported that 32.2% of the respondents in a Los Angeles metropolitan survey complained of insomnia. These surveys, as well as the estimates that 7% of chronic insomniacs[1] and as many as 25-30% of men with sleep disorders[4] suffer from sleep-induced apnea, suggest that sleep apnea affects more than 2 million people in the United States.

Sleep apnea can be definitively diagnosed only when the patient is sleeping. Ear, nose, and throat, cardiovascular, and pulmonary examinations during the waking state usually reveal no abnormalities. However, a provisional diagnosis can be made easily by asking a patient these questions: "Are you excessively sleepy during the day?" and "Do you snore loudly?" Positive answers to these two questions suggest that the patient may be suffering from obstructive sleep apnea.

In addition to excessive daytime sleepiness and snoring, other symptoms of sleep apnea include gasping for breath at night, frequent movement in sleep, fatigue, difficulty remaining alert, and early morning headaches. Personality changes, irrational or emotional behavior, depression, or anxiety may be present. Obesity can also be a contributing factor to sleep apnea, but it does not necessarily accompany sleep apnea. Some of the patients we have evaluated had previous treatment for the sleep disorder with various medications (for example, Ritalin, Dexedrine, Desoxyn, Tofranil), but the medications were ineffective or exacerbated the problem. Such patients should be referred for polygraphic analysis of sleep respiratory patterns which can provide the definitive diagnosis. Once diagnosed, most cases of sleep apnea can be treated effectively.

Despite the suspected prevalence of sleep apnea, the ease of diagnosis, and the availability of effective treatments, the majority of cases that we have seen are undiagnosed or misdiagnosed. Because this syndrome is sleep-induced, the patient may be able to report only that he is "tired" or "too sleepy" during the day. Fear of being labeled "lazy" can make a patient reluctant to discuss his condition, even though the effect on his social life and career may be profound. When a patient does consult a physician, his condition is often misdiag-

nosed as narcolepsy, hypersomnia, epilepsy, idiopathic or drug-induced insomnia, thyroid dysfunction, depression, or Cheyne-Stokes syndrome. Proper diagnosis is essential, both because the customary hypnotic drug treatment for sleep disorders can be detrimental or fatal,[5] and because the hypoxemia resulting from sleep apnea can be a contributing factor to cardiopulmonary disorders.[6-8] It has been hypothesized that sleep apneas are also involved in some cases of sudden infant death syndrome.[9,10]

Minor respiratory irregularities during sleep have been documented in normal subjects, especially during rapid-eye movement sleep.[11] Sleep apnea, however, is defined as the occurrence of 30 or more separate episodes, each lasting at least ten seconds, of the cessation of airflow at the nose and mouth during seven hours of sleep.[4] We have documented three types of sleep apnea in our laboratory, and these observations agree with those described elsewhere in the literature.[1,4] The apnea types are called obstructive, central, and mixed sleep apnea.

Obstructive Sleep Apnea

In obstructive sleep apnea there is a cessation of nasal and buccal respiration while diaphragmatic efforts continue. These respiratory efforts may be exaggerated during obstructive apnea episodes. The blockage that causes obstructive sleep apnea often appears to be associated with genioglossus muscle atonia during sleep; genioglossus muscle activity is completely normal when the patient is awake. In normal respiration the genioglossi contract during inspiration, clearing the upper airway and allowing sufficient air flow. Other factors associated with blockage may be hypertrophic tonsils or adenoids, paralysis of vocal chords during sleep, excessively soft palate tissue, a short neck or thick jowls. The patient may not, however, have structural abnormalities of the upper airway. We suspect that in such patients obstructive sleep apnea is caused by malfunction in the fine coordination of the activities of the diaphragm, intercostal muscles, and upper airway soft structures during nocturnal respiration.

Central Sleep Apnea

Central sleep apnea is the cessation of nasal and buccal respiration resulting from a lack of diaphragmatic and intercostal efforts. Normal respiratory mechanisms that are sensitive to blood gas levels appear not to function during sleep-apnea episodes. When a patient is awake and holding his breath, it is extremely difficult for him to decrease oxygen saturation to the 80% level. During sleep-apnea episodes, however, the oxygen saturation level can drop to as low as 45%.

Mixed Sleep Apnea

In mixed sleep apnea central sleep apnea appears initially and is followed by temporary upper airway obstruction when diaphragmatic efforts resume.

Methodology

Fourteen patients with sleep apnea were evaluated. Four were self-referrals: one complained of excessive daytime sleepiness; one complained of impotence; and two complained of excessive daytime sleepiness, snoring, and gasping for breath at night. The third and fourth patients believed they had sleep apnea after reading a magazine article describing the disorder.

The remaining ten patients were referred by physicians. Presenting complaints were excessive daytime sleepiness (two patients), excessive daytime sleepiness and snoring (two patients), excessive daytime sleepiness and insomnia (two patients), fatigue (one patient), fatigue and snoring (one patient), gasping for breath at night (one patient), and narcolepsy (one patient). Only two of these ten patients were initially referred for suspected sleep apnea.

All patients evaluated in our laboratory as a result of any type of sleep complaint are screened on the first night for sleep apnea by means of a nasal thermistor that records all-night respiration. For patients who are suspected of having sleep apnea, either as a result of the first night evaluation or because of the presenting complaint, respiration is also monitored with a buccal thermistor, thoracic and abdominal strain gauges, an impedance pneumograph, or all of these. Intercostal and genioglossus electromyographic activity, blood oxygen saturation (ear oximeter) and intrathoracic pressure (endoesophageal pressure transducer) are recorded along with standard measurements of electroencephalographic, electro-oculographic, and electromyographic activity. Xerograms of the upper airway during sleep are taken when obstructive sleep apnea is suspected.

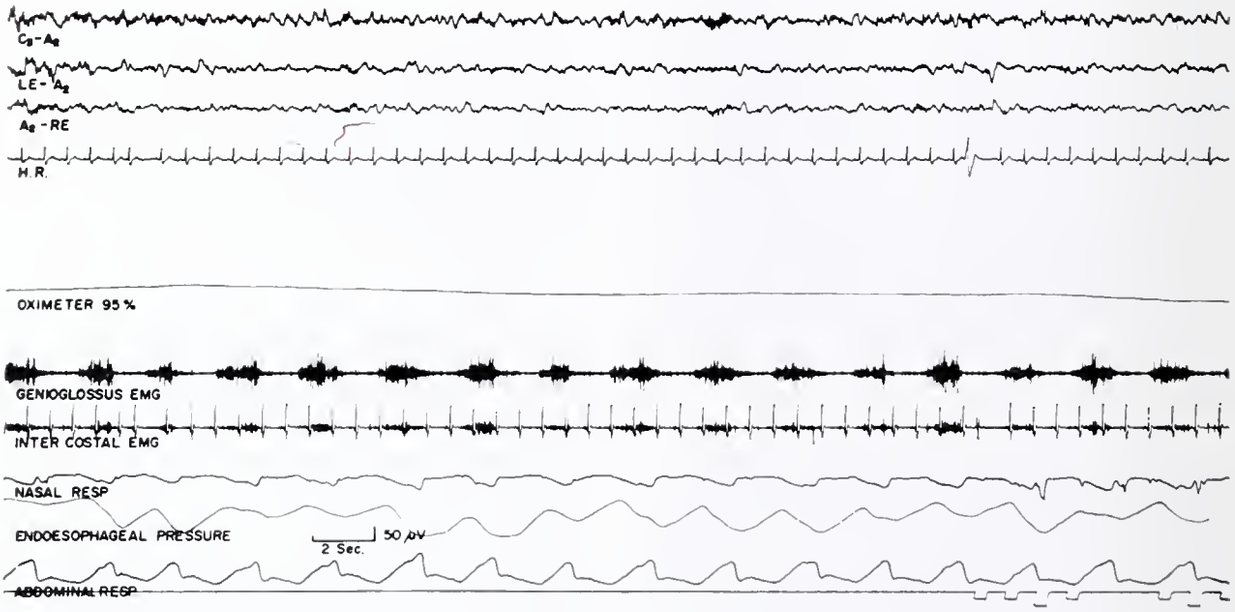
Results

Fig 1 summarizes the clinical features of the 14 patients (2 females, 12 males) who had sleep apnea. The majority of these patients were in their 40s and 50s (mean age, 48), and their weights ranged from 60-135 kg (132-298 lb). The distribution of ages and sex is comparable to that of other samples of patients.[1,4,13] As Fig 1 shows, eight of the patients were obese, and the incidence of cardiac abnormalities was higher than would be expected in a random sample of patients of similar ages. Of the 14 patients, 7 had obstructive apnea, 5 mixed apnea, and 2 central apnea. Figs 2-4 are, respectively, sections of polygraphic recordings of a normal segment of sleep, an obstructive apnea episode, and a cen-

1. Clinical features of 14 patients with sleep apnea.

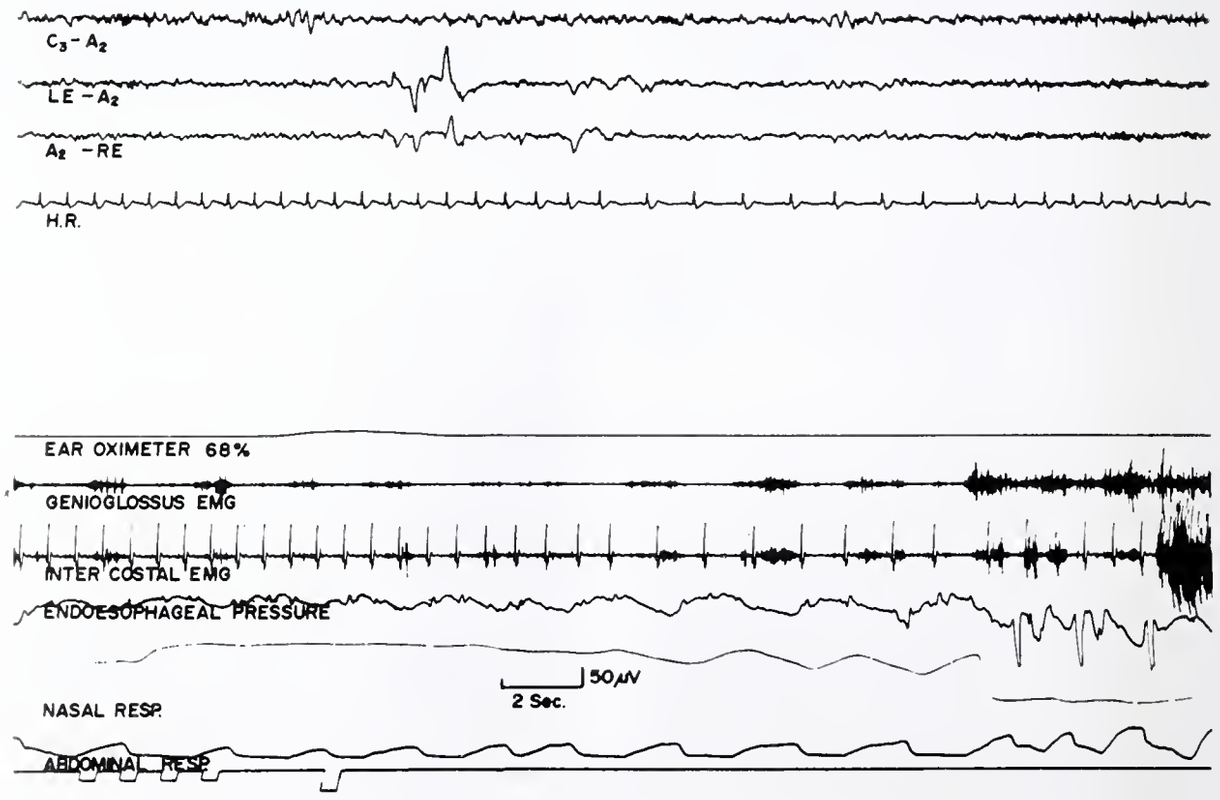
Patient	Age	Sex	Weight kg	Weight (lb)	Chief Complaint	Cardiac Abnormalities	Diagnosis*
1	62	M	75	(165)	EDS†	No	OSA
2	55	F	70	(154)	EDS	No	MSA
3	42	M	86‡	(190)	EDS, gasping for breath at night	No	CSA
4	58	M	82	(180)	EDS, gasping for breath at night	No	MSA
5	57	M	118‡	(260)	EDS, snoring	No	MSA
6	10	M	77‡	(170)	EDS, snoring	Yes	OSA
7	64	M	73	(160)	EDS, snoring, gasping for breath at night	Yes	OSA
8	54	F	61	(135)	Gasping for breath at night	Yes	OSA
9	27	M	60	(132)	Fatigue	No	CSA
10	47	M	102‡	(225)	Fatigue, snoring	No	MSA
11	44	M	135‡	(298)	EDS, insomnia	Yes	OSA, narcolepsy
12	59	M	115‡	(254)	EDS, insomnia	Yes	OSA, narcolepsy
13	56	M	79‡	(175)	Narcolepsy	No	MSA
14	43	M	135‡	(297)	Impotency	No	OSA

* OSA, MSA, and CSA are obstructive, mixed, and central sleep apnea, respectively
† Excessive daytime sleepiness (EDS) ‡ Obese, above ideal weight



2. Polygraphic sleep tracing of patient during normal respiration.

3. Polygraphic sleep tracing of a patient during an obstructive sleep apnea episode.



tral apnea episode. Xerograms of the upper airway of the patient with obstructive apnea in undisturbed sleep and during an obstructive-apnea episode are shown (Figs 5, 6).

We have found that sleep apnea in some patients is sleep-stage specific. One of our patients with central apnea had episodes during stages 1 and 2, but not during stages 3 and 4.[14] In another patient the episodes occurred only in rapid-eye-movement sleep. The majority of patients displayed apnea episodes during both rapid-eye-movement and non-rapid-eye-movement. A major area for future research is the determination of whether these different kinds of sleep apnea are the result of the same or different diseases, or of the same disease in different stages of progress.[14]

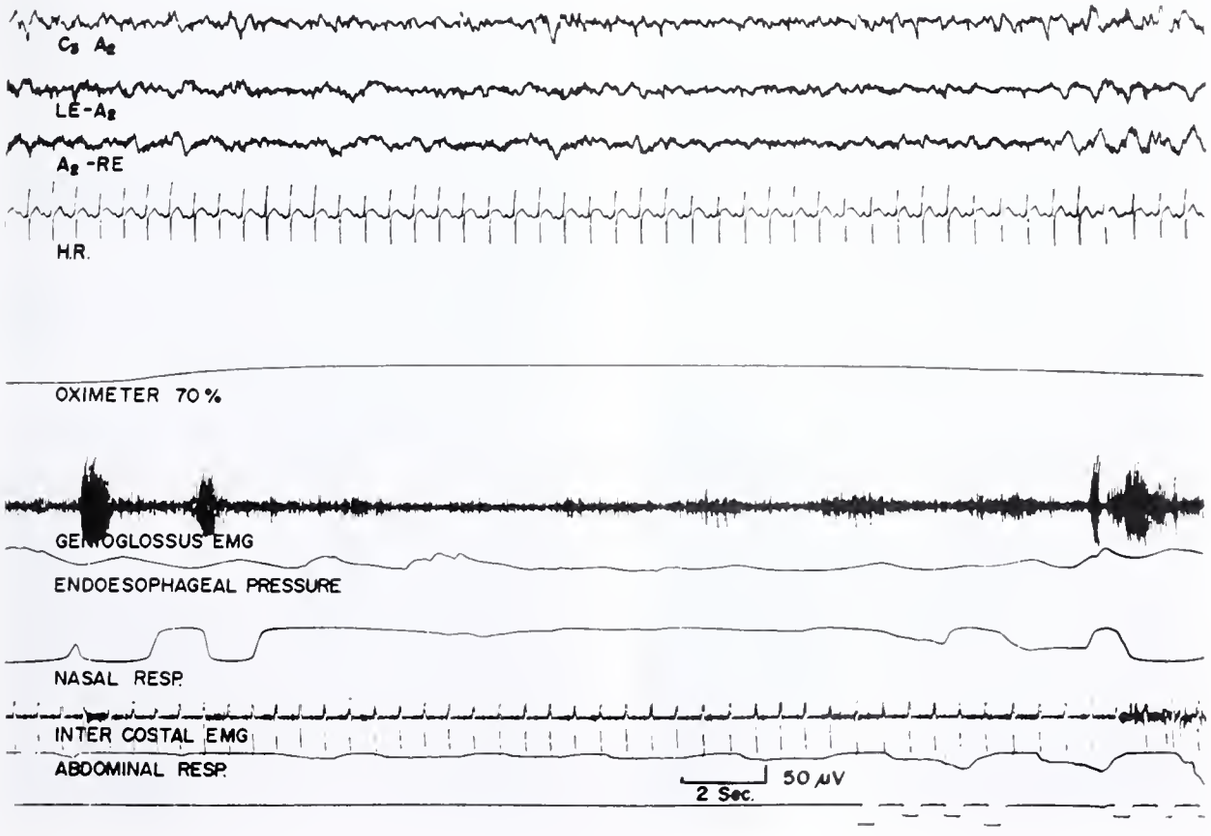
Case Reports

The following are three representative case reports from the sample of 14 patients with sleep apnea.

Case 1: A 62-year-old white man had experienced excessive daytime sleepiness for the past 20 years. During the day he lapsed into sleep for periods of 5 to 15 minutes.

The frequency of the diurnal sleep periods varied from several times a day to once every three days. When sleeping, the patient often sat up in bed; on several occasions he had fallen out of bed while sitting up. His brother reported that, when they slept together as children, the patient often struggled during his sleep. After the patient's tonsils were removed, 17 years before our evaluation, he noticed a slight reduction in the frequency of his daytime sleep attacks. His condition had been diagnosed as narcolepsy, and Ritalin had been prescribed but had no effect. The patient had also been given Dexedrine, which produced some reduction in his daytime sleepiness. In the two years before we evaluated the patient, he had gained weight. Concurrently, his problem of day-

4. Polygraphic sleep tracing of a patient during a central sleep apnea period.



time sleepiness had become worse. He was unable to drive without falling asleep and had hired a chauffeur. He took a colleague to business meetings to keep him informed if he fell asleep. When evaluated, he was found to have obstructive apnea as a result of the failure of the genioglossi to contract. Apnea episodes were often terminated by arousals. The patient refused to have a tracheostomy performed. He agreed to go on a strict diet to lose 9 kg (20 lb). After four months and a 9 kg weight loss, the patient was reevaluated. He still had sleep apnea episodes, but only half as often as before. The patient was evaluated a third time approximately one year after his initial visit. He had reached his ideal weight after an 18 kg (40 lb) weight loss. He no longer took a colleague to business meetings and reported almost a complete remission of his daytime sleepiness. The nocturnal evaluation indicated that there had been a further decrease of the number of apnea episodes, most of which were relatively short in duration and not terminated by behavioral or electroencephalographically detectable arousals.

Case 2: A 55-year-old white woman complained of constant drowsiness during the day. She had even fallen asleep while walking, and once lacerated her forehead to the extent that stitches were required. Her voice was hoarse, and her family described her sleep as "very noisy." The diagnostic impression from previously consulted physicians had been "organic brain syndrome" and "organic brain disease with functional overlay." The use of decongestants and room mist had been recommended.

The sleep-laboratory evaluation indicated severe obstructive sleep apnea. The patient's breathing was shallow and her breath rate was elevated (63 breaths per minute). A tracheostomy was performed and the patient was reevaluated. Her respiration rate was reduced to 30 breaths per

5. Xerogram of patient made while asleep and snoring.

6. Xerogram of patient made during an obstructive sleep apnea period.

minute, sleep was improved, and no apnea periods were observed. The patient described an almost immediate change in her waking behavior. She said she had received a "miracle treatment." She was not sleepy or drugged, and she felt as if life had begun all over for her. On the third postoperative day, her intelligence quotient as measured by the Wechsler Adult Intelligence Scale increased 35 points over the preoperative measurement.

One of the patient's family members, however, took the patient to a large, out-of-state medical center for a second opinion concerning the tracheostomy. She was evaluated during the day with the tracheostomy tube closed. An adequate airway was observed, and the respiratory flow volume curve was normal. The tracheostomy tube was closed permanently. When the patient's initial symptoms reappeared, she was evaluated again in our laboratory. Severe mixed sleep apnea periods were present. A tracheostomy was again performed, and the patient reported a remission of her symptoms.

Case 3: This 42-year-old white man was a self-referral. He complained of dozing off frequently during the day. On numerous occasions while driving he had caught himself swerving off the road. He was aware of gasping for breath when he awakened at night, but described his sleep as generally sound. As a result of his excessive daytime sleepiness, he was about to lose his job as consultant to a large firm. He was unsure of how long he had had the problem, but it had worsened in the past seven years. Monitoring in the sleep laboratory revealed between 200 and 300 periods of central apnea with a maximum duration of one minute each. At present no treatment has been implemented; however, implantation of a diaphragm pacemaker is being considered.[15]

Treatment

Initial treatments to consider for the patient with obstructive or mixed sleep apnea include weight loss for the obese patient, tonsillectomy or adenoidectomy for the patient with hypertrophic tonsils or adenoids, and resection of excessive soft palate tissue. Our studies and others[1,4,6,8,13] have shown tracheostomy and positioning of a permanent tracheal valve (which can be covered in the daytime) to be very effective. This measure should be considered when there is no obstruction of the upper airway that can be corrected surgically, or when weight loss is ineffective or cannot be attained. In cases of obstructive apnea with significant cardiac arrhythmias, immediate treatment is indicated. The newly developed procedure of nocturnal diaphragm pacing is a treatment that is being considered for patients with central sleep apnea.[15] At this writing, implantation of the diaphragm pacemaker has been reported in approximately 250 patients with sleep apnea.[16] Weight loss does not appear to be an effective treatment for patients with central sleep apnea. No medications are accepted as effective in the treatment of sleep apnea; however, there is some indication that tricyclic antidepressants might be useful.[17,18]

Discussion

Sleep apnea is often misdiagnosed as narcolepsy, hypersomnia, epilepsy (when treated heavily with sedatives), thyroid dysfunction, depression, idiopathic or drug-induced insomnia, or Cheyne-Stokes syndrome. Although it is not possible to distinguish between sleep apnea and some of these disorders from a clinical history alone, certain information obtained during the initial interview can be helpful. The obstructive sleep-apnea patient usually snores. In addition, the excessive daytime sleepiness reported by these patients is different from that reported by narcoleptics. Sleep-apnea patients generally say that if they make an effort to stay awake they can usually postpone sleep; this is not the case with most narcoleptics. Short naps do not relieve sleepiness in sleep-apnea patients, while they may in narcoleptics. Generally,

the patient with narcolepsy has several distinct sleep attacks during the day, whereas the sleep-apnea patient has a more chronic condition of fatigue and sleepiness. Narcolepsy may also be accompanied by cataplexy, sleep paralysis, hypnogogic hallucinations, or all three.

Hypersomnia is characterized by excessively long nocturnal sleep, daytime sleep periods, or both. Sleep onset is usually rapid, heart and respiratory rates may be higher than normal, and the patient may awaken with postdormital confusion.

Cheyne-Stokes respiration occurs in patients with failure of the left side of the heart. Cheyne-Stokes respiration can be diagnosed in the waking state. The patient may have periodic breathing as he dozes off to sleep, and he may be awakened by acute pulmonary edema.

Despite the value of the clinical history in diagnosing sleep apnea, a nocturnal evaluation of the patient is required for definitive diagnosis. The nocturnal evaluation of sleep respiratory patterns also provides important information about the type of apnea, the severity of the disorder, the frequency and duration of apnea episodes, and whether or not the episodes are sleep-stage specific. The extent of change in cardiopulmonary function resulting from sleep-stage apnea episodes can also be monitored.

For the sleep-apnea patient with nocturnal or diurnal cardiac dysfunction, or both, (for example, asystolia, arrhythmias, systemic or pulmonary hypertension), immediate treatment (tracheostomy in the case of obstructive sleep apnea or diaphragmatic pacemaker in the case of central sleep apnea) is strongly advised. The obese obstructive-sleep-apnea patient with cardiac dysfunction should not delay a tracheostomy in the hope that weight loss will correct the disorder. If, after the tracheostomy, the patient reaches his ideal weight, he can be reevaluated during sleep with the tracheostomy tube closed. If respiration is found to be normal, the tracheostomy tube can be closed permanently.

Sleep apnea is not a rare, esoteric disorder. Physicians frequently see patients with symptoms that can be a result of sleep apnea. When the physician makes a differential diagnosis in such cases, sleep apnea always should be considered as a possible underlying disorder.

References

1. Guilleminault C, Dement WC: Sleep apnea syndromes and sleep disorders. In: Williams RL, Karacan I, Eds: Sleep disorders: diagnosis and treatment. New York, John Wiley & Sons, to be published.

2. Karacan I, Thornby JI, Anch M, et al: Prevalence of sleep disturbance in a primarily urban Florida county. Soc Sci Med 10:239-244, 1976.

3. Kales A, Bixler EO, Leo LA, et al: Incidence of insomnia in the Los Angeles metropolitan area. Sleep Res 3:139, 1974.

4. Guilleminault C, Eldridge FL, Simmon FB, et al: Sleep apnea syndrome—can it induce hemodynamic changes? West J Med 123:7-16, 1975.

5. Hishikawa Y, Furuya E, Wakamatsu H, et al: A polygraphic study of hypersomnia with periodic breathing and primary alveolar hypoventilation. Bull Physiopathol Resp 8:1139-1151, 1972.

6. Lugaresi E, Coccagna G, Mantovani M, et al: Effects of tracheostomy in two cases of hypersomnia with periodic breathing. J Neurol Neurosurg Psychiat 36:15-26, 1973.

7. Vogel JHK, Kelminson LL, Cotton EK: Pulmonary hypertension during sleep. Amer J Dis Child 113:576-580, 1967.

8. Imes NK, Orr WC, Smith RO, et al: Retrognathia and sleep apnea. A life-threatening condition masquerading as narcolepsy. JAMA 237:1596-1597, 1977.

9. Steinschneider A: Prolonged apnea and the sudden infant death syndrome: clinical and laboratory observations. Pediatrics 50:646-654, 1972.

10. Guilleminault C, Peraita R, Souquet M, et al: Apneas during sleep in infants: possible relationship with sudden infant death syndrome. Science 190:677-679, 1975.

11. Snyder F, Hobson JA, Morrison DF, et al: Changes in respiration, heart rate, and systolic blood pressure in human sleep. J Appl Physiol 19:417-422, 1964.

12. Sauerland EK, Harper RM: The human tongue during sleep: electromyographic activity of the genioglossus muscle. Exp Neurol 51:160-170, 1976.

13. Sackner MA, Landa J, Forrest T, et al: Periodic sleep apnea: chronic sleep deprivation related to intermittent upper airway obstruction and central nervous system disturbance. Chest 67:164-171, 1975.

14. Karacan I, Altinel A, Williams RL, et al: Experience with respiratory disturbance during sleep. In: Koella WP, Levin P, Eds: Sleep 1976. Basel, S Karger, to be published.

15. Glenn WWL, Shaw RK, Cole DR, et al: Upper airway obstruction complicating central alveolar hypoventilation (Ondine's curse) treated by tracheostomy and diaphragm pacing, abstracted. Am Rev Resp Dis 113:262, 1976.

16. Glenn WWL: Personal communication.

17. Murray GB: Carbamazepine for central sleep apnea. Letters to the editor. JAMA 238:212-213, 1977.

18. Dement WC: Daytime sleepiness and sleep "attacks." In: Guilleminault C, Dement WC, Passouant P, Eds: Narcolepsy. New York, Spectrum, 1976, p 18.

Ismet Karacan, MD, Department of Psychiatry, Baylor College of Medicine, Texas Medical Center, Houston, TX 77030.

Suicide and the family physician: clinical assessment of suicide risk

Thomas Ray Mareth, MD

Suicide prevention is a difficult and common problem. The keystone of prevention is accurate assessment of suicide risk. Based upon demographic data, diagnosis, psychosocial factor, and the clinical setting, criteria for the selection of high risk patients are presented.

The task of assessing suicide risk confronts all clinicians. The average physician is estimated to lose about 12 patients to suicide during his career.[1] National statistics emphasize the magnitude of the problem. More than 25,000 people are reported to have killed themselves in 1974.[2] These figures, however, may understate the problem. Intentional, self-inflicted deaths may go unrecognized by the authorities. Many known suicides are not officially recorded as such for a variety of legal, social, and financial reasons. The actual number of suicides may be at least twice the official statistics.[3]

Physicians are interested in predicting other forms of suicidal behavior as well. Again the figures demonstrate the enormity of the problem. Apparent suicide attempts are generally thought to be eight to ten times more frequent than completed suicides.[4,5] One recent study suggests an even higher ratio.[6] Predicting suicidal behavior and classifying attempts as "serious" or "nonserious" is as difficult a problem as it is common.

Biochemical techniques attempt to relate suicide to changes in steroid[7-9] and serotonin[10] metabolism. Psychological tests have been used in an attempt to predict self-destructive behavior,[11] and suicide rating scales have been devised.[12] These new techniques often are not applicable clinically, and their advantage over more traditional predictors, such as demographic and diagnostic variables, has not been established. Despite our vast and growing knowledge about suicide, no one can make absolute predictions. However, our limitations do not justify nihilism. Although we may be unable to predict accurately and consistently a patient's future behavior, we can assign patients to groups at high risk for self-destruction and give them special care and attention.[13]

Physicians, especially family physicians, may have a special role in suicide prevention.[14,15] Forty to 75% of all suicidal people seek some form of medical care three to six months before their death.[16] Accurate diagnosis and appropriate therapy are mandatory. Many people, particularly depressed or alcoholic patients, may complain of somatic rather than emotional symptoms. If the physician senses an underlying psychiatric problem, direct inquiries about alcohol use, depression, grief, or suicidal thoughts may lead to a diagnostic and therapeutic outpouring of emotion. The family physician's role as a trusted authority may make it easier for the patient or his family to confide in him. The family doctor's intimate knowledge of the patient and his family and of the stresses facing the patient may offer unique insights. It is the purpose of this review to help the physician better conceptualize and define the high-risk patient using clinically available data: demographic variables, medical and psychiatric diagnosis, psychological and social factors, and the clinical setting.

Demographic Data

The demographic variables of age, sex, and marital status have been shown repeatedly to be valuable indicators of suicide risk. Men are more likely to take their own lives

than are women, although women are more likely to make nonfatal suicide attempts.[3,17]

Age is another important factor. Older persons are more likely to succeed in self-destruction. American men show a steadily increasing suicide rate up to age 85. The rate for women rises until age 55 to 65 and then falls.[18] Among young people, the complete suicide rate is lower, but the attempt rate is relatively high.[17] While these young people may have no obvious wish to die, they may feel themselves hopelessly trapped in an intolerable situation.[19] Such persons should be carefully evaluated and, if depression and hopelessness are prominent, considered at high risk.

Marital status is another important predictor. It has long been known that single people are more likely to take their own lives. The widowed and divorced also appear to be at particular risk.[20]

Other demographic factors, such as low socioeconomic status,[18,21,22] unemployment,[20,23,24] overcrowding,[25] antisocial behavior,[26] or living in the depressed "core area" of the city,[6,20,25] may be useful, although their predictive value is less clearly demonstrated. One variable that may be of special significance is a history of psychiatric care. Barraclough demonstrates a history of psychiatric treatment or consultation in more than half of 100 suicide cases.[27]

In particular, a history of suicide attempts should alert the physician to the possibility of future attempts. One recent study which followed patients for three months showed a 25% rate of repeated suicide attempts.[28] Unless effectively managed, repeated attempts are all too often fatal. Rosen,[29] in a five-year follow-up study, shows that of those who had previously "seriously" attempted suicide, 6.45% did kill themselves later.

Even "nonserious" attempts must be recognized and treated. Such attempts are often desperate cries for help. If the family or physician ignores that cry, more desperate and dangerous methods may be tried. In Rosen's study, 3.1% of the "nonserious" or "less serious" attempters took their own lives. Dorpat and Ripley estimate the incidence of subsequent successful suicide among attempters to be in the range of 10 to 20%.[30] Clearly, previous psychiatric difficulties and especially previous suicide attempts must be regarded seriously.

Diagnostic Data

Valuable information about self-destructive potential also may be found in the patient's psychiatric and medical diagnosis. Mental illness frequently is clinically diagnosed among suicidal patients and suggests that virtually all suicides are the product of psychiatric disturbance. Several reports in the literature document a demonstrable mental illness in 90 to 99% of those who commit suicide.[1,27,31,32] The family physician's special knowledge of the patient enables him to see subtle changes in the patient's mood or behavior which may be the early symptoms of emotional illness. Because of his relationship to the family, relatives may call the doctor's attention to changes in the patient's affect or activities. Such changes should alert the physician to the possibility of an emotional disorder requiring further investigation.

Alcoholism and depression are the two psychiatric diagnoses most commonly associated with suicide. One must always consider suicide potential among these patients. The relationship of depression to suicide is well recognized. Thirty-five to

80% of all attempters are clinically depressed.[17,20,22,32,33] In his review of 100 cases of completed suicide, Barraclough[27] reports that 70% suffered a depressive illness, 15% were alcoholic, and only 3% were schizophrenic. The signs and symptoms of depression, such as sleep disturbance, crying spells, and loss of interests and enthusiasm, should be carefully sought by the trained medical observer. If an affective illness is suspected, the physician may inquire about the severity of the symptoms and ask how the future looks to the patient. If marked hopelessness is noted, the patient is at high risk and warrants special attention.[34-36] A sense of hopeless futility may spawn suicidal fantasies, and the presence of any suicidal ideas should be carefully explored. Specific death fantasies, planning ahead for one's own death, and the consideration of highly lethal means of self-destruction are clear danger signals.

Alcoholics comprise another diagnostic group clearly associated with suicidal behavior. Salamon[18] notes that the alcoholic may exhibit impulsive and self-destructive character traits. When intoxication diminishes the alcoholic's controls, suicide may result. Rushing concludes that 7 to 21% of alcoholics eventually die by their own hand, compared with 1% of the general population.[37]

Alcohol is involved in many suicides of nonalcoholics as well. It has been reported that about 40% of all suicides are in some way connected with the use of alcohol.[1] When blood ethanol levels were determined at the autopsies of 381 suicides in Virginia, 36.7% revealed some alcohol and 22.2% showed greater than 150 mg/100 ml.[38]

Other psychiatric illnesses are less commonly related to suicidal behavior. Self destruction is not infrequent among schizophrenic patient populations.[12] Winokur's long-term follow up of psychiatric patients, the "Iowa 500," revealed that 8.5% of manics, 10% of schizophrenics, and 10.6% of depressives later took their own lives.[39] While depressive patients are most prone to suicide, clearly other psychotic disorders carry a significant risk.[40]

In older age groups, organic psychoses may be associated with self-destruction. Batchelor notes that among suicide attempters age 60 or older, 80% were depressed while 10% exhibited an organic brain syndrome.[41] Other workers have reported an organic syndrome in more than 40% of geriatric patients.[42] Kreitman's study demonstrates that while organic psychoses are seen in 5 to 8% of the suicidal geriatric patients, depression, alcoholism, and personality disorders are more common even in the older age groups.[43]

The physician must consider not only the patient's psychiatric diagnosis but also his medical illnesses. The family practitioner, as a health care overseer, has a perspective of the total person that the consultant specialist may lose. Loss of one's health, beauty, and physical abilities may result in a depressive disorder. After an illness, some patients may feel unable to cope with the demands of home or occupation. Actual disability and unrealistic fears may precipitate an affective illness or suicide attempt.

Chronic, terminal, or painful illnesses also may produce suicidal ideation. Fears of cancer or other serious medical conditions have been clearly associated with self-destruction.[30,41,44] More than 70% of the suicides in Dorpat's study[45] had one or more active physical illnesses. Peptic ulcer, rheumatoid arthritis, and hypertension are most commonly reported in the literature.[44,45] Viskum recently demonstrated a significantly higher suicide rate among ul-

cer patients than expected.[46] While such correlations of medical illnesses with self-destruction rarely permit suicide prediction, the physician should consider his patients' medical problems and their adjustments to them.

Psychosocial Factors

Stress and the patient's personal and social resources for dealing with it must be evaluated. Self-destruction may be conceptualized as one response to stress by the predisposed individual. Arguments with the spouse, a new person in the home, a serious personal illness or illness of a close family member, and a court appearance for an offense are potent stressors. Paykel has demonstrated a clear correlation between these stressful "life events" and suicide attempts.[47] In her extensive review of the literature, Weissman[17] reports general agreement that self-destructive acts occur in the context of recent and severe interpersonal conflict. Loss of a valued person or relationship may be a particularly devastating stress. In Moore's series, the loss of a mate resulted in four-fold increase in suicide among males.[38] Certain age groups face built-in stresses. Fann and Wheless[48] point out that forced retirement, loss of financial resources, physical incapacitation, and loss of status and self-esteem are powerful sources of stress confronting the elderly. Faced with such problems and feeling unable to cope or adapt, the older person may become depressed, hopeless, and suicidal.

When evaluating self-destructive potential, not only the stress but also the person facing that difficulty must be weighed. Certain groups of patients seem more likely to respond to stressful life events with suicidal behaviors. The chronic alcoholic,[49] the impulsive patient,[50] the passive-aggressive or passive-dependent person,[51] and the unwed mother[52] represent special groups at high risk. Early parental loss or inconsistency also may predispose to depression and suicide.[53-56] The socially isolated patient who responds to stress by withdrawal rather than by seeking help, or the paranoid individual may represent a serious suicide potential.[1,51,57] When such a predisposed individual is faced with stress, suicide risk must be considered. The family physician may simply ask about the stress, the patient's emotional response to it, and the patient's sources of support. If depression, hopelessness, and despair are prominent themes, the question of suicide must be directly confronted.

The sources of emotional support for the potentially suicidal patient are quite important. If significant others are seen as indifferent, rejecting, punitive, or overcontrolling, suicide risk may be increased.[51] Straker[58] notes that family members may engage in a conspiracy of silence by ignoring the suicidal person's complaints. Others have noted families of suicidal patients to be less supportive than other families and even hostile.[59,60] Some families actually offer the patient "an invitation to die".[61] Such disturbed family relationships may be known before a suicide attempt. These dynamics often are not appreciated until after a self-destructive act. When such skewed family relationships are not corrected, the prognosis for future suicide is guarded.[62] Psychiatric referral for individual or family therapy may be indicated.

Clinical Setting

The clinical setting allows valuable inferences regarding suicide risk. The seriously depressed patient who feels his defenses failing may suddenly become more agitated

and depressed. Such a change may indicate that a suicide attempt is imminent. Indeed, any sudden change in the clinical state of the psychotically depresssed patient must be viewed cautiously. Fawcett[1] reports that one-third of high-risk patients suddenly showed an abrupt and falsely reassuring "improvement." Such "improvement" may indicate that the internal debate has ended and suicide has been chosen over the misery and despair of depression. Other suicidal behaviors may be less readily observed and must be elicited by questioning. When suicidal ideation is discovered, the physician must ask if any plans have been made. Preparing a will, writing a suicide note, or securing the means of self-destruction have ominous implications.

Suicidal communications always should be carefully considered and the patient carefully evaluated. Barraclough[27] finds that 34% of patients in his series gave "unequivocal statements of intention" before their deaths. In his study of 134 cases, Robins[63] notes that 69% had communicated suicidal ideas and 41% had stated specifically that they intended to commit suicide. In most cases, the statements were of recent onset, repeatedly verbalized, and expressed to many persons.

The circumstances of the fantasied or previously attempted suicide should be considered when evaluating self-destructive potential. Drug ingestion is the most common method of attempted suicide, accounting for 70 to 90% of cases studied in a recent review.[17] While drug ingestors generally are considered to have relatively low lethal intent and often may use the attempt to get help or establish communication,[64] one must remember that many "serious" attempters choose this method.[65] In a recent study, Dean found 48.5% of drug ingestors admitted to the hospital to have serious intent.[66] The amount taken, the expected results, and the intent of the patient must be evaluated carefully. Medical lethality correlates with intent only when the attempter can accurately predict the probable results of his actions.[67] Even nonlethal overdose must be regarded seriously until the patient's intent has been clarified. More violent and nonreversible means of self-destruction, such as shooting, hanging, or jumping from high places, frequently are associated with completed suicides and imply higher risk.[18,68] Even "low-risk" attempters must be taken seriously. If the patient must attempt suicide to manipulate his life situation, he must be desperate. Individual psychotherapy or family therapy may be indicated.

The setting of the attempted or fantasied suicide also must be weighed when evaluating self-destructive potential. Persons who choose isolated settings where rescue is unlikely or who take precautions against discovery or intervention must be regarded at high risk.[69] One technique for determining the seriousness of an attempt, the "risk-rescue rating," compares the lethality of the agent chosen to the rescue potential implicit in the setting.[70] Knowledge of a previous attempt or direct questioning about the fantasied suicide may yield crucial information and must be carefully investigated.

Conclusion

Suicide and suicidal behaviors are, unfortunately, very common. Physicians, perhaps family physicians in particular, have a special role in suicide prevention. In the hospital or in the office, the physician may define high-risk patients by using demographic variables, diagnostic information, psychosocial factors, and the clinical set-

ting. An unmarried older man who has been diagnosed as depressed or alcoholic, who faces stress without adequate emotional resources, who feels hopeless and has contemplated self-destruction is the classic stereotype of the suicidal patient. Special attention must be directed toward high-risk patients. The physician should not fear that his questions will precipitate suicide. Direct and tactful questioning by a supportive and respected authority often is both diagnostic and therapeutic. Questions about loss, stress, depression, drinking habits, or future outlook may be lifesaving. Only after an accurate assessment of suicide risk has been made can effective treatment be undertaken and suicide prevented.

References

1. Fawcett J: Clinical assessment of suicidal risk. Postgrad Med 55:85-89, 1974.

2. US Bureau of the Census: Statistical Abstract of the US: 1976, 97th ed. Washington, DC, 1976.

3. Shneidman ES: An overview of suicide. Psychiat Ann 6:13-47, 1976.

4. Parkin D, Stengel E: Incidence of suicidal attempts in an urban community. Br Med J 5454:133-138, 1965.

5. Farberow NL, Shneidman ES: The cry for help. Toronto, McGraw Hill, 1961.

6. Jarvis GK, Ferrence RG, Johnson FG, et al: Sex and age patterns in self-injury. J Health Soc Behav 17(2):145-154, 1976.

7. Bunney WE Jr, Fawcett JA: Possibility of a biochemical test for suicidal potential: an analysis of endocrine findings prior to three suicides. Arch Gen Psychiat 13: 232-239, 1965.

8. Krieger G: The plasma level of cortisol as a predictor of suicide. Dis Nerv Syst 35:237-240, 1974.

9. Krieger G: Is there a biochemical predictor of suicide? Suicide 5:228-231, 1975.

10. Asberg M, Traskman L, Thoren P: 5-HIAA in the cerebrospinal fluid: a biochemical suicide predictor? Arch Gen Psychiat 33:1193-1197, 1976.

11. Brown F: More definitive assessment of suicide potential possible: battery of tests is used. Clin Psychiat News 5(3):1-12, 1977.

12. Farberow NL, MacKinnon D: Prediction of suicide: a replication study. J Pers Assess 39(5):497-501, 1975.

13. Shershow JC: Editorial. The sometimes science of suicidology. N Engl J Med 294(6):332-333, 1976.

14. Murphy GE: The physicians responsibility for suicide. I. An error of commission. Ann Intern Med 82(3): 301-304, 1975.

15. Murphy GE: The physicians responsibility for suicide. II. Errors of omission. Ann Intern Med 82(3):305-309, 1975.

16. Litman RE: Management of suicidal patients in medical practice. In: Shneidman ES, et al, Eds: The psychology of suicide. New York, Science House, 1970.

17. Weissman MM: The epidemiology of suicide attempts, 1960 to 1971. Arch Gen Psychiat 30:737-746, 1974.

18. Salamon I: Evaluation of suicidal patients. NY State J Med 74:64-65, 1974.

19. Burrows GD, Harari E: Psychiatric aspects of drug overdose in adults. Anaesth Intens Care 2:310-315, 1974.

20. Edwards JE, Whitlock FA: Suicide and attempted suicide in Brisbane. 1. Med J Aust 1:932-938, 1968.

21. Smith JS, Davison K: Changes in the pattern of admissions for attempted suicide in Newcastle upon Tyne during the 1960's. Br Med J 4:412-415, 1971.

22. Jacobson S, Tribe P: Deliberate self-injury (attempted suicide) in patients admitted to hospital in Mid-Sussex. Br J Psychiat 121:379-386, 1972.

23. Robin AA, Brooke EM, Freeman-Browne DL: Some aspects of suicide in psychiatric patients in Southend. Br J Psychiat 114:739-747, 1968.

24. Tuckman J, Youngman WF: A scale for assessing suicide risk of attempted suicides. J Clin Psychol 24:17-19, 1968.

25. Morgan HG, Burns-Cox CJ, Pocock H, et al: Deliberate self-harm: clinical and socioeconomic characteristics of 368 patients. Br J Psychiat 127:564-574, 1975.

26. Morgan HG, Barton J, Pottle S, et al: Deliberate self-harm: a follow-up study of 279 patients. Br J Psychiat 128:361-368, 1976.

27. Barraclough B, Bunch J, Nelson B, et al: A hundred cases of suicide: clinical aspects. Br J Psychiat 125:355-373, 1974.

28. Niskanen P, Koskinen T, Lepola U, et al: A study of attempted suicides in urban versus rural areas, with a follow up. Acta Psychiat Scand 52:283-291, 1975.

29. Rosen DH: The serious suicide attempt: five-year follow up study of 886 patients. JAMA 235(19):2105-2109, 1976.

30. Dorpat TL, Ripley HS: The relationship between attempted suicide and committed suicide. Compr Psychiat 8(2):74-79, 1967.

31. Dorpat TL, Ripley HS: A study of suicide in the Seattle area. Comp Psychiat 1:349-359, 1960.

32. Robins E, Murphy GE, Wilkinson RH Jr, et al: Some clinical considerations in the prevention of suicide based on a study of 134 successful suicides. Am J Public Health 49:888-899, 1959.

33. Pokorny AD: Suicide rates in various psychiatric disorders. J Nerv Ment Dis 139:499-506, 1964.

34. Beck AT, Kovacs M, Weissman A: Hopelessness and suicidal behavior: an overview. JAMA 234(11):1146-1149, 1975.

35. Lester D, Beck AT: Suicidal intent, medical lethality of the suicide attempt, and components of depression. J Clin Psychol 31(1):11-12, 1975.

36. Wetzel RD: Hopelessness, depression, and suicide intent. Arch Gen Psychiat 33:1069-1073, 1976.

37. Rushing WA: Individual behavior and suicide. In: Gibbs JP, Ed: Suicide. New York, Harper & Row, 1968.

38. Moore G, Buckman J: Epidemiologic observations on suicides in Virginia. Va Med Mon 103(5):371-374, 1976.

39. Winokur G, Tsuang MT: The Iowa 500: suicide in mania depression, and schizophrenia. Am J Psychiat 132:650-651, 1975.

40. Noreik K: Attempted suicide and suicide in functional psychoses. Acta Psychiat Scand 52(2):81-106, 1975.

41. Batchelor IRC, Napier MB: Attempted suicide in old age. Br Med J 2:1186-1190, 1953.

42. O'Neal P, Robins E, Schmidt EH: Psychiatric study of attempted suicide in persons over sixty years of age. Arch Neurol Psychiat 75:275-284, 1956.

43. Kreitman N: Age and parasuicide (attempted suicide). Psychol Med 6:113-121, 1976.

44. Lessey RA, Reading A: Evaluating suicidal risk. Primary Care 2(1):57-63, 1975.

45. Dorpat TL, Anderson WF, Ripley HS: The relationship of physical illness to suicide. In: Resnik HLP, Ed: Suicidal behaviors, diagnosis and management. Boston, Little, Brown, and Co, 1968.

46. Viskum K: Ulcer, attempted suicide and suicide. Acta Psychiat Scand 51:221-227, 1975.

47. Paykel ES, Prusoff BA, Myers JK: Suicide attempts and recent life events. A controlled comparison. Arch Gen Psychiat 32:327-333, 1975.

48. Fann WE, Wheless JC: Depression in elderly patients. So Med J 68(4):468-473, 1975.

49. Murphy GE: Recognition of suicidal risk: the physicians responsibility. So Med J 62:723-728, 1969.

50. Sarwer-Foner GJ: Depression and suicide: on some particularly high risk suicidal patients. Dis Nerv Syst 30:Suppl:104-110, 1969.

51. Kiev A: Cluster analysis profiles of suicide attempters. Am J Psychiat 133(2):150-153, 1976.

52. Gabrielson IW, Klerman LV, Currie JB, et al: Suicide attempts in a population pregnant as teenagers. Am J Public Health 60:2289-2301, 1970.

53. Greer S: The relationship between parental loss and attempted suicide: a control study. Br J Psychiat 110:698-705, 1964.

54. Birtchnell J: The relationship between attempted suicide, depression, and parental death. Br J Psychiat 116:307-313, 1970.

55. Crook T, Raskin A: Association of childhood parental loss with attempted suicide and depression. J Consult Clin Psychol 43(2):277, 1975.

56. Lester D, Beck AT: Early loss as a possible "sensitizer" to later loss in attempted suicides. Psychol Rep 39:121-122, 1976.

57. Bagley C, Jacobson S, Rehin A: Completed suicide: a toxonomic analysis of clinical and social data. Psychol Med 6:429-438, 1976.

58. Straker M: Clinical observations of suicide. Can Med Assoc J 79:373-379, 1958.

59. Rosenbaum M, Richman J: Suicide: the role of hostility and death wishes from the family and significant others. Am J Psychiat 126:1652-1655, 1970.

60. Richman J: A clinical study of the role of hostility and death wishes by family and society in suicidal attempts. Israel Ann Psychiat 8:213-231, 1970.

61. Jourad SM: Living and dying. Suicide, an invitation to die. Am J Nursing 70:269-275, 1970.

62. Kiev A: Prognostic factors in attempted suicide. Am J Psychiat 131(9):987-990, 1974.

63. Robins E, Gassner S, Kayes J, et al: The communication of suicidal intent: a study of 134 consecutive cases of successful (completed) suicide. Am J Psychiat 115(8): 724-733, 1959.

64. Fox K, Weissman MM: Suicide attempts and drugs: contradiction between method and intent. American Orthopsychiatric Association Meeting, New York, May 29-June 1, 1973.

65. Sims M, Purdy M, Devenyi P: Drug overdoses in a Canadian city. Am J Public Health 63:215-226, 1973.

66. Dean G, Adelstein A, Spooner J: Suicide and self-poisoning in Great Britain and Ireland. Int J Epidemiol 5(2):145-151, 1976.

67. Beck AT, Beck R, Kovacs M: Classification of suicidal behaviors: I. Qualifying intent and medical lethality. Am J Psychiat 132(3):285-287, 1975.

68. Tuckman J, Youngman WF: Identifying suicide risk groups among attempted suicides. Public Health Rep 78:763-766, 1963.

69. Beck AT, Schuyler D, Herman I: Development of suicide intent scales. In: Beck AT, Resnik HLP, Lettieri DJ, Eds: The prevention of suicide. Bowie, Md, Charles Press, 1974.

70. Weisman AD, Worden JW: Risk-rescue rating in suicide assessment. Arch Gen Psychiat 26:553-560, 1972.

T. R. Mareth, MD, Clark AFB Hospital, Clark AFB, PI, PSC-3, Box 16033, APO SF 96432.

90% of insured Texas doctors choose the occurrence policy.

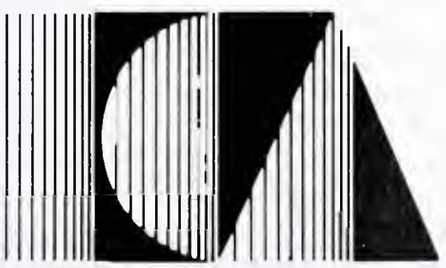
There must be a reason why.

In fact, some surveys show this figure to run as high as 95%. This includes doctors insured in both private and governmental markets.

The fact that so many doctors have chosen this form of professional liability insurance coverage over all others, should tell you something.

It's really as simple as this. You wouldn't insure your home or car with lesser coverage, so why would you have lesser coverage on your most valuable asset —your medical practice.

Give your practice the protection it deserves with a tough, no-nonsense occurrence form policy. Call for your nearest ICA agent today at (713) 526-4863.



INSURANCE CORPORATION OF AMERICA

HOUSTON, TEXAS

A+AAAAA protection provided.

Anxiety and symptom evaluation

Jane Preston, MD

A moment between doctor and patient is a sociological, psychological, and neuroendocrinological event for each participant. A case will be scanned as such an event. Recent neuroendocrinological research relating to anxiety will be described.

Case Report

A 43-year-old fair-skinned white woman was seen for anxiety depression. The depression improved rapidly and the patient continued psychotherapy for diffuse anxiety. There were no somatic complaints, psychophysiological reactions, or hysterical interpersonal patterns. Her anxiety gradually reduced and her management of it became more effective. After approximately eight months of therapy there developed, unrelated to stress, blind spots in the left eye occurring randomly during the day and lasting from 15 seconds to 2 minutes. Initially, they occurred approximately once a week, but increased to one every three to four hours. Results of laboratory and neurological examination were within normal limits. The patient accepted referral for ophthalmological diagnostic study, continuing in psychotherapeutic work.

The ophthalmologist reported "no pathological symptoms or signs" and "no disease." He stated that she seemed "hysterical and rambled a lot." He sounded irritated. When the patient described the ophthalmologist's examination her anxiety increased; speech was rapid and scrambled, and body language tense and flutteringly active. She was apprised of this behavioral evidence of increased anxiety. She was understandably concerned that she might lose her vision. The transient episodic and subjective quality of scotomata made description difficult; she feared she would be unable to describe symptoms clearly enough. However, her disorganizing anxiety centered on apprehension of failing her doctor. Secondarily, she feared that failure would result in her blindness and that anger with herself for "not doing it right" would reprecipitate depression. The root of her anxiety in performing for an authority figure was identified, and then she could handle her attenuated anxiety internally. She thereafter delivered a logically sequenced, cogent description of her symptoms. Again she was referred to the ophthalmologist. He reported a diagnosis of neuritis, nonspecific. Initially uncertain that it was the same woman, he expressed amazement and pleasure at the change in her manner of describing symptoms and of relating to him.

Status-Role Considerations

Sociologists view status in relationships as analogous to utilization of glucose in metabolism.[1] Rights and obligations of a particular status constitute a role. A culture's recognition and acceptance of the role metabolizes (energizes for flow) social processes. For example, when the woman identified herself as a patient the receptionist accepted her right to be in the office. The patient's obligation was to present a symptom. Reciprocally, the physician's right to ask highly personal questions was accepted as inherently part of his status. His obligation was accepted as properly applied to defining presence or absence of disease. Thus status-role expedited the interactional process. In this case the ophthalmologist and the patient were bound by basic role structures to perform in certain ways, and neither felt that that performance had met his or her internal standards. The ophthalmologist's response to his discomfort was closure of the relationship and the diag-

nostic door; the patient's was increased rambling diffuseness toward an authority figure, thereby also closing the diagnostic door.

Psychodynamic Considerations

While the physician's individual psychodynamic forces are not known, the patient's can be reviewed in pertinent aspects. The patient recalled her first-generation German-American father as being 16 years older than her mother, brusque, distant, critical, and harried by the responsibilities of a large family during depression days. She was next to the last of seven children, the second daughter. She recalled no personal communications with her father other than required reporting of her own misbehavior. Punishment from early age was routinely and promptly an enraged belting by her father. Her first-generation Italian-American mother anxiously insisted that she report mischief or errors to her father, frequently saying, "Tell him the right way and he won't spank you." In adult life when problems portended an unpleasant outcome, she became apprehensive in a diffuse and overinvested way, verbally jumped around, included pertinent material but in such a scatter that it was virtually unidentifiable. Her anxious approaches precluded thoughtful planning, obscured the nature of the problem, and usually irritated others. Accordingly, she had mostly unpleasant, unproductive interpersonal work experiences. As her therapeutic work became effective, she could differentiate between experiencing historical (neurotic) anxiety and appropriate current concerns. Her behavior reflected the change and she worked appropriately in her patient role with the competent and concerned ophthalmologist.

Physiological Considerations

Her anxieties produced pale gray skin, evasive rapid eye movements, tense upper trunk, shallow respiratory pattern, slightly hunched shoulders, retracted head and overly soft and drifting voice tones. Verbalizations were in urgent spurts of words trailing toward silence, only to burst with soft crescendo in mid-sentence to a seemingly different mid-sentence, pertaining but logically unattached to the first part. Physiology and body language were consistent with a communication of "Situation ominous! Action required!" She would enter the office, sit as far back as possible in the corner of the chair, cringingly half turned from the doctor, pale, glancing flutteringly about, somewhat resembling a frightened trapped rabbit. When she did delineate a fear or isolate a distinct problem through the haze of her anxiety, her respiration would deepen and slow, and her voice tones would become lower, more full, and of an entirely easy timbre. Speech flow, pace, and pattern altered to flexibly match the then logical verbal content. Change in skin color was dramatic in its rapid shift from gray to normal. The change occurred as rapidly as a blush, though no flushing was present.

Physician's Sociological and Physiological Considerations

Data from the ophthalmologist is limited to observations of sociological status and pattern of communication. No psychiatric history is available. His status-role set was that of most specialists—an authority whose actions, questions, observations were expected to stem from role-appropriate medical knowledge, skills, and goals.

Age, sex (in the United States), and dress code were appropriate to physician status. High regard from his colleagues, numerous honors and academic credits, and exemplary ethical standing substantiated the status-role coding. His rights and obligations, tacitly accepted, were exercised in the investigation, evaluation, and attempted medical judgment of the patients' intimacy area of personal physiological functioning. His attempts were thwarted by the diffuseness and scatter of the patient's responses. He, like the patient, was presented with a demand for definitive role function in the presence of entangling uncertainties. From one human to another, anxiety is a signal for urgent alerting for action. His voice timbre indicated such a normal physiological response. In the first phone report it was slightly higher than usual, tense, pace unrelaxed. The emotional message was pushing frustration. He was in the midst of something tauntingly, unsatisfactorily incompleted. In the second call his voice pitch was lower, pace relaxed, and tonal quality flexible, laughter easy. One is reminded of voice patterns of coronary-prone subjects.[2]

Neuroendocrinological Considerations

There is a wealth of biochemical research data centering on stress and the neuroendocrinological and emotional accompaniments thereof. Chronic and acute stress responses can be biologically differentiated.[3] Moreover, in humans biochemical differences are demonstrable between those experiencing competency and those experiencing uncertainty.[4] Recently, a plethora of information emerged about endorphins.[5-7] Anodynin, an endorphin with a molecular structure similar to morphine, has properties of (1) relieving low-grade continuing pain or anxiety, and (2) evocation of a pleasant sense of well being. Specific limbic area anodynin receptors also are opiate receptors. Anodynin in many respects resembles morphine in its effect. Such a feeling state approaches a physiologically functional optimum. Theoretically, reconstructing the case would lead from norepinephrine to anodynin, from anxiety to composure. The ophthalmologist's behavior suggests he experienced anxiety from a threat of role incompetence, a threat triggered by the patient's anxiety signals. His anxiety interfered with procuring diagnostic data, a problem intensified by obscuring of diagnostic cues by the patient. The patient's removal of obscuring stress signals cleared the field for the physician to pursue symptom data. As hypothesis, the physiological shifts are compatible with shifts from norepinephrine to anodynin in each person.

Practical Considerations

This article describes anxiety as a physiological event, similar to a pulse. It is an indicator of complex endocrinological variations. Anxiety is a communication to a physician; it is not a communication about a physician's personhood. It is, accordingly, a diagnostic puzzle.

While the cardiologist cannot and should not expect to be able to decipher all the patient's puzzles, competent management of his own anxiety will enable him to proceed in his own role more confidently. Learning to assess one's own anxiety is similar to learning to use an ophthalmoscope or stethoscope. A perceptual ability is refined and comes into consciousness only after focal pursuit.

Useful clinical points are:

1. Conscious persevering effort to perceive anxiety is a prerequisite to its evaluation.
2. Some anxiety is always present in a patient's visit to the doctor.
3. Anxiety is an intrapersonal neuroendocrinological event.
4. Anxiety may be stimulated by early psychodynamic experiences.
5. Anxiety so stimulated may be elaborated by rigidly applied role expectations.
6. Another person's manifest anxiety is a primitive alerting signal to which all normally respond with an urge to perform ("fight or flight").
7. Interference with performance may shift alerting to anxiety and irritation.
8. Conscious assessment of degree of patient anxiety serves two purposes: (a) validates historical data (like checking for memory accuracy), and (b) serves as a conscious check on the physician's alarm response.

This focus acts to circumvent performance failure by stimulating further useful questions, such as: (1) "Is the alarm state appropriate to the organic state?" (2) "Is it in excess of symptoms expressed?" (3) "Is there enough data on the organic state to say whether anxiety is excessive or not?" (4) "Can the patient be calmed sufficiently to obtain more data?" (5) "If not, might one seek liaison consultation to make diagnostic efforts easier and more effective for physician and patient?"

Summary

A perusal of a diagnostic interview as a sociological psychodynamic and neuroendocrinological moment for physician and patient has been made with particular focus on anxiety. Practical application of objective and introspective anxiety evaluation has been described.

References

1. Brodie KH, Hamburg DA: American handbook of psychiatry, vol 6. New York, Basic Books, 1975, p 623.
2. Jenkins CD, Rosenman RH, Friedman M: Replicability of rating the coronary-prone behavior pattern. Brit J Prev Soc Med 22:16-22, 1968.
3. Buckley JP: Hormones, metabolism and stress, biochemical and physiological effects of intermittent neurogenic stress. House of the Slovak Acad Sci, 1973, pp 165-175.
4. Daniel J, Mikulaj L, Vrazda L: Hormones, metabolism and stress, correlations between certain emotional and endocrine stress indicators in man. House of the Slovak Acad Sci, 1973, pp 255-258.
5. Wahlstrom A, Johansson L, Terenius L: Characterization of endorphines (endogenous morphine-like factors) in human CSF and brain extracts, opiates and endogenous opioid peptides. Amsterdam, North-Holland, 1976, pp 49-56.
6. Bloom F, Battenberg E, Rossier J, et al: Endorphins are located in the intermediate and anterior lobes of the pituitary gland, not in the neurohypophysis. Life Sci 20(1):43-47, 1977.
7. Bradbury AF, Smyth DG, Snell CR, et al: Comparison of the analgesic properties of lipotropin C-fragment and stabilized enkephalins in the rat. Bio Chem Biophys Res Commun 74(2):748-754, 1977.

Jane Preston, MD, Clinical Associate Professor of Psychiatry, Baylor College of Medicine, 2210 Maroneal, Suite 312, Houston, TX 77030.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

TEXAS REPRESENTATIVES

A. F. Ennis, Jr. and B. C. Crim, Suite 210, 712 N. Washington, Dallas 75246	Telephone (214) 821-4640
W. L. Kirk, 1508 Hermann Prof. Bldg., Houston 77030	Telephone (713) 797-9835
M. C. Rollans, 408 GPM Bldg., South Tower, San Antonio 78216	Telephone (512) 344-5901

KELSEY-SEYBOLD CLINIC

TEXAS MEDICAL CENTER ● 6624 FANNIN STREET ● HOUSTON, TEXAS 77030 ● AC (713) 797-1551

INTERNAL MEDICINE

Allergy
C. W. Ewing, M.D., F.A.C.A.
S. Weakley, M.D.

Arthritis and Rheumatic Diseases
J. W. Kemper, M.D., F.A.C.P.
M. S. Fischer, M.D.

Cardiology
E. F. Beard, M.D., F.A.C.P.
D. D. Goulden, M.D.
M. J. Mihalick, M.D.

Endocrine and Metabolic Diseases
M. P. Kelsey, M.D., F.A.C.P.
A. E. Leiser, M.D., F.A.C.P.
P. K. Champion, Jr., M.D., F.A.C.P.

Gastrointestinal Diseases, Endoscopy
J. R. Kelsey, Jr., M.D., F.A.C.P.
P. S. Bentlif, M.D., F.A.C.P.
R. D. Elchhorn, M.D., F.A.C.P.
F. S. O'Neil, M.D., F.A.C.P.
J. W. McBee, M.D., F.A.C.P.

General Internal Medicine
G. E. Burke, M.D.
C. F. Taboada, M.D., F.A.C.P.
N. H. Nauert, Jr., M.D.
G. G. Bourianoff, M.D.
G. Crofoot, M.D.

Hematology
J. B. Bart, M.D., F.A.C.P.

Infectious Diseases
S. Riggs, M.D., F.A.C.P.

Nuclear Medicine
D. E. Mouton, M.D., F.A.C.N.M.

Oncology
E. N. Root, M.D.

Pulmonary Diseases, Bronchoscopy
S. P. Fischer, M.D., F.A.C.P.
B. D. Walker, M.D.

DERMATOLOGY

W. M. Fraser, M.D., F.A.A.D.
D. W. Owens, M.D., F.A.A.D.

GENERAL & THORACIC SURGERY

Surgical Endoscopy & Colonoscopy
W. D. Seybold, M.D., F.A.C.S.
J. D. McMurrey, M.D., F.A.C.S.
J. L. Doggett, M.D., F.A.C.S.
M. F. Appel, M.D., F.A.C.S.

OBSTETRICS & GYNECOLOGY

M. L. Cody, M.D., F.A.C.S., F.A.C.O.G.
W. A. Johnson III, M.D., F.A.C.O.G.
A. G. Guette, M.D.

OCCUPATIONAL & PREVENTIVE MEDICINE

M. B. Johnston, M.D., F.A.C.Pr.M.
W. B. Dye, M.D., F.A.C.Pr.M.
H. B. Elwell, Jr., M.D.
R. M. Fenno, M.D., F.A.C.P.
F. A. Goss, M.D.
W. R. Hawkins, M.D., F.A.C.Pr.M.
W. R. Heln, M.D., F.A.C.Pr.M.
L. A. Herrmann, M.D.
G. F. Kelly, M.D., F.A.C.Pr.M.
C. A. Owen, M.D., F.A.C.S.
B. W. Prior, M.D., F.A.C.Pr.M.
N. A. Tadros, M.D., F.A.C.Pr.M.
A. M. Wyss, M.D., F.A.C.Pr.M.
R. J. Huebner, M.D.
T. K. Lee, M.D., M.P.H.

OPHTHALMOLOGY

H. E. Wahlen, M.D., D.A.B.O.
J. E. Key, II, M.D., D.A.B.O.

ORTHOPEDIC SURGERY

R. A. Fulford, M.D., F.R.C.S. (C)
T. H. Crouch, M.D., F.A.C.S.

OTOLARYNGOLOGY

J. C. Dickson, M.D., F.A.C.S.
J. L. Smith, M.D., F.A.C.S.
L. P. Conrad, M.D.

PATHOLOGY

R. A. Jordan, M.D., F.A.S.C.P.

PEDIATRICS

Rheumatology
E. J. Brewer, Jr., M.D., F.A.A.P.

Allergy and Pulmonary Diseases
C. W. Ewing, M.D., F.A.A.P.

Gastroenterology
G. D. Ferry, M.D., F.A.A.P.

General Pediatrics and Consultation
F. J. Boland, M.D., F.A.A.P.
R. M. Thaller, M.D., F.A.A.P.
K. C. Pinckard, M.D.

PSYCHIATRY

C. G. Cochran, M.D.
R. Daichman, M.D.

RADIOLOGY

R. J. Kurth, M.D., F.A.C.R.
E. G. Linares, M.D.
P. Raphael, M.D.
T. P. Connolly, M.D.

UROLOGY

D. W. Pranke, M.D., F.A.C.S.
F. M. Fry, M.D.

DENTISTRY

J. W. Orr, D.D.S.
D. L. McClung, D.D.S.

SPEECH PATHOLOGY & AUDIOLOGY

D. R. Fox, Ph.D.
J. W. Porter, M.A.
N. Shulak, M.A.

EXECUTIVE DIRECTOR

J. A. Bakken, F.A.C.M.G.A.

K-S WEST

1111 Augusta Drive
Houston, Texas 77057
(713) 780-1661

K-S DOWNTOWN

Two Houston Center, Suite P-310
909 Fannin Street, Houston, Texas
77002 (713) 654-4401

Lithium

Cal K. Cohn, MD

Lithium carbonate has become a commonly used psychotropic drug. Although it is a great help to many patients, physicians need to be aware of its many potential side effects, and its interactions with other drugs and other medical conditions.

Uses of Lithium

The major indication for the use of lithium is, of course, manic-depressive disease.[1] How many people suffer from this disorder? The usual figure given is three to four per 100,000 people in the United States. Many of these people are being or should be treated with lithium. Lithium has revolutionized treatment in many instances; 80% of manic-depressive patients respond well.[8]

The indications for lithium are fairly well defined: acute mania, prophylaxis of recurrent mania, hypomania, recurrent depressive disorders (unipolar depression). It is a helpful antidepressant in a few depressed patients, but the clinical criteria for identification of probable responders is unclear. In most patients who are already depressed, it is of no help in treating the immediate depressive episode.

In a significant number of patients with schizo-affective schizophrenia, lithium prevents recurrent episodes. It occasionally has been recommended to treat patients suffering from alcoholism, premenstrual cramps, character disorders such as the antisocial personality, sexual deviance, hyperkinesis, aggression, tardive dyskinesia, spasmodic torticollis, Huntington's disease, and thyrotoxicosis. There are even occasional reports of positive results in schizophrenics.[7]

By far, its most frequent use is in manic-depressive disease. Mania is characterized by euphoria or irritability in the setting of decreased need for sleep, hyperactivity (socially, physically, sexually), racing thoughts, grandiosity, delusions, and buying sprees, with return to premorbid functioning between episodes. (Episodes may last for days to months.) Many, if not all, of these symptoms are usually present. The 20% who do not respond to lithium often require a carefully titrated combination of a major tranquilizer such as chlorpromazine and an antidepressant such as amitriptyline.

Mechanism of Action, Side Effects

The mechanism(s) of action of lithium is unclear. It has many known actions, in some ways resembling its fellow alkali element sodium, in other ways, because of its dense charge and subsequent large hydration sphere, resembling magnesium. It is a potent inhibitor of the ubiquitous and vital enzyme adenyl cyclase.[7] It is a salt (administered as lithium carbonate) and thus represents a heavy salt load. Which, if any, of these properties are relevant to its clinical efficacy are unclear. Several of these properties can account at least in part for some of its side effects. For example, adenyl cyclase inhibition may account for the nontoxic goiters and hypothyroidism often seen in these patients since release of tetriodothyronine (T_4) from the thyroid gland is an adenyl cyclase-mediated step. Patients receiving lithium can and do sometimes become frankly hypothyroid and require screening tests of thyroid function every six months or so. Another frequent complaint of these patients is polyuria. This probably arises from a combination of the increased salt load and a blocking of the effect of adenyl cyclase-mediated antidiuretic hormone on the distal renal tubule, creating an iatrogenic nephrogenic diabetes insipidus refractory to Pitressin snuff. Most patients complain of this side effect at least to some degree. Not only does lithium have a side effect on the kid-

ney, but it is excreted primarily via the kidney. Therefore, patients receiving lithium require periodic evaluation of their renal status—their creatinine and blood urea nitrogen levels.

Diarrhea, another common complaint, can be either a manifestation of lithium toxicity or a side effect of therapeutic doses of lithium. Sometimes the only way to distinguish the two is to stop the lithium for 24 hours (its half-life in the blood stream is approximately 24 hours) and restart it at a lower dosage. Commonly, however, this complaint may reflect direct irritation of the gastrointestinal tract at dosages well within the therapeutic range. Often, instructing the patient to take their lithium with meals (which, unlike the effect on many drugs, does not decrease absorption) and prescribing the drug in the better tolerated capsule form relieves an otherwise annoying problem.

Lithium Levels

Question: How helpful are serum lithium levels in monitoring lithium therapy?

Answer: Fairly helpful. Serum lithium levels are not a precise indicator of the patient's clinical status. Patients may occasionally respond, without evidence of toxicity, only at serum levels of 2.5 mEq/liter or higher (generally considered to be in the toxic range) while a few respond at serum levels as low as 0.2 mEq/liter. In general, a diagnosed manic-depressive patient should not be considered a lithium nonresponder until he or she has been given trial doses that elicit clinical toxicity (dizziness, hyperreflexia, muscle spasms), then the same dose decreased by 15 to 20%. This may require a total dose of 1,800 to 2,700 mg per day in divided doses.

Lithium and Leukocytosis

Patients receiving lithium not infrequently develop a significant degree of leukocytosis (predominately mature polys) of from 14,000 to 20,000 WBCs per cubic centimeter of blood. This effect of lithium therapy has aroused the interest of oncologists who are studying the possibility that lithium can stimulate bone marrow regeneration. It is not known if these leukocytes are functional. Therefore, lithium effect should be considered in the differential diagnosis of leukocytosis in patients receiving lithium.

Lithium, Low Salt Diets, and Diuretics

Lithium is relatively, if not absolutely, contraindicated in patients requiring either a low-salt diet or diuretics. The propensity to lithium toxicity is inversely proportional to sodium balance. If sodium is depleted either by profuse sweating (tennis players, for example, probably should take an additional salt tablet if they are taking lithium), vomiting, or diarrhea, lithium levels rise proportionately and toxicity ensues. Lithium, in general, crosses membranous barriers such as the renal tubule or gastrointestinal mucosa less readily than does sodium, and thus can rapidly accumulate during periods of sodium depletion. If diuresis becomes necessary in a patient receiving lithium, furosemide in usual doses can be used without incurring relative sodium loss. Thiazide diuretics, on the other hand, are contraindicated.

The additional salt load of lithium carbonate may precipitate congestive heart failure, including increased venous pressure, swollen ankles, chest rales, and shortness of breath. Sometimes this can be controlled by either using the very smallest effective dose of lithium or by carefully monitored (often in the hospital) diuresis with furosemide. More often it is an indication for discontinuation of lithium.

Electrocardiographic Changes

It is essential to obtain an ECG prior to initiating lithium therapy. Lithium often induces benign ECG changes, not in themselves indications to stop therapy, which are reversible when lithium is discontinued. These changes include flattening or inver-

sion of T-waves, slight elevation of ST segments, and prolonged QRS complexes.

Lithium and "Normalization" of Mood

For a long time the assumption has been that the patient who responds to lithium is experiencing a "normalization" of behavior. Recent evidence suggests that this may not be true.[4,5] Subjects (not manic-depressives) who were administered lithium carbonate in a double-blind study were consistently able to detect changes in mood and cognitive functioning both subjectively and by observers blinded to the use of drug or placebo. Thus, lithium's effect on normal behavior is not innocuous. It has specific effects of its own which need to be considered when prescribing. For example, some accountants and engineers complain that they are not able to perform their work as well when taking lithium. Perhaps in such individuals a phenothiazine-antidepressant regimen should be considered.

Lithium Dermatitis

Not uncommonly a papular rash may appear over the outer thighs and buttocks. This is not thought to be an allergic phenomenon, but rather secondary to alterations in sweat gland electrolyte transport of sodium. It is usually not pruritic and commonly disappears when lithium dosage has been stabilized.

Lithium During Pregnancy

For a number of years the Register of Lithium Babies (401 Parnassas Ave, San Francisco, CA 94122) has revealed a trend towards an increased incidence of cardiovascular anomalies in children born to mothers who took lithium during pregnancy. For that reason, if at all possible, pregnant women should not receive lithium.[9]

Lithium and Organic Brain Syndrome

Mania or hypomanic behavior may be symptoms of illness other than manic-depression. Patients with multiple sclerosis commonly become euphoric during the course of the illness. They may display hypomanic or frankly manic behavior. This manifestation of organic brain syndrome responds well to lithium. Of course, it has not been possible to rule out that such patients have two illnesses, manic-depressive psychosis and multiple sclerosis. However, the frequent concurrence of the two states in the absence of previous manic episodes or family history of affective disorders makes more likely the possibility that the behavioral disorder is a facet of the neurologic disease. There have been reports of lithium-responsive manic behavior occurring in a postpartum psychosis and in a post-head trauma syndrome, the latter a 12-year-old boy who had been struck by a car. He presented with classic hypomanic behavior, was given lithium, 300 mg orally, twice a day, and when his serum level of lithium reached 0.6 mEq/liter, he rapidly became euthymic.[2]

Lithium, on the other hand, can induce organic brain syndromes even at therapeutic serum levels. This appears to be especially true in some schizo-affective or schizophrenic patients.[6]

Lithium is a complex drug with many side effects of which physicians should be aware. Knowledge of lithium usage is important not just for psychiatrists, but for all physicians since, in the course of their practices, they will encounter patients who are taking this simple but potent ion.

References

1. Cade JFJ: Lithium salts in the treatment of psychotic excitement. Med J Aust 36:349-352, 1949.
2. Cohn CK, Wright JR, DeVaul R: Lithium carbonate in the treatment of post-head trauma syndrome. Dis Nerv Syst, in press.
3. Freedman AM, Kaplan HI, Sadock BJ, Eds: Comprehensive textbook of psychiatry, 2nd Ed, Baltimore, Williams & Wilkins Co, 1975, p 1013.
4. Judd LL, Hubbard B, Janowsky DS, et al: The effect of lithium carbonate on affect, mood and personality of normal subjects. Arch Gen Psychiat 34:346-351, 1977.
5. Judd LL, Hubbard B, Janowsky DS, et al: The effect of lithium cabonate on the cognitive function of normal subjects. Arch Gen Psychiat 34:355-357, 1977.
6. Johnson G, Maccario S, Gershon S: The effects of lithium on electroencephalogram, behavior and serum electrolytes. J Nerv Dis 151:273-289, 1970.
7. Johnson FN, Ed: Lithium research and therapy, London, Academic Press, 1975, pp 25-138, 353-495.
8. Schou M: Lithium in psychiatric therapy and prophylaxis. J Psychiat Res 6:67-95, 1968.
9. Weinstein MR, Goldfield M: Cardiovascular malformations with lithium use during pregnancy. Am J Psychiat 132:529-531, 1975.

Cal K. Cohn, MD, Department of Psychiatry, The University of Texas Medical School at Houston, PO Box 20708, Houston, TX 77030.

Right to treatment: issues and implications

Webster Blocker, MD, Carla Dowben, JD

An enigmatic group of issues in the mental health field revolve around the question of whether society, the state, or both have a moral responsibility to provide medical and psychiatric care to persons who are ill and incapable of recognizing their illness. A corollary to this question is the concern with the method of carrying out this "duty of care." In an effort to expedite or discharge this duty of care, civil rights are often shunted and unfortunately a person may be incarcerated in many states without due process of law. Caught up in the conflicts, psychiatrists often are viewed as tools of the society or state who function to maintain social control by confining "disruptive" individuals to psychiatric hospitals under the guise of mental illness. These concerns, with their inherent tensions, are prevalent in the right to treatment issues which are unfolding in much court litigation.

This article is intended to stimulate interest among medical professionals in an area where a multitude of conflicting issues are being fought in judicial arenas. It is not intended to sway the reader, but is an attempt to convey a perspective of the beginning and evolvement of the main issues.

There is an essential conflict of attitudes in the precedents, both psychiatric and legal, which provides the background for this paper. Psychiatrists traditionally have viewed themselves as advocates for the patient, leading the effort for reforms in order that psychiatric patients may be treated in the most respectful and humane manner possible. Efforts have been made to move the psychiatrically ill from almshouses and penal institutions to hospitals.[1] Other efforts have been made to change the involuntary commitment procedures to spare the patient and family from unnecessary public embarrassment and inconvenience. What has been viewed by psychiatrists as an essentially humane effort has now come into conflict with the individual's civil rights as protected by the US Constitution. This is evidenced by the numerous court cases in the field.[2]

Legal and Constitutional Issues

Departing from the medical arena into the less familiar arena of the legal and constitutional issues, the right to treatment issue has developed significantly since the 1960s and will receive more attention in the future. In 1960, Morton Birnbaum, MD, a physician and lawyer, articulated the concept of the right to treatment in an article in the *American Bar Association Journal*.[3] The primary concern of Dr Birnbaum's article was that no serious legal or social consideration was given to the problem of whether the mentally ill individual received adequate medical treatment with a view towards eventual release. Thus, he advocated that a right to treatment existed for the mentally ill.

The issue lay essentially dormant until 1966 when the first major court case involving the constitutional right to treament, *Rouse vs Cameron*,[2] was decided. The plaintiff in this case had been arrested for carrying a deadly weapon, an offense which carried a maximum sentence of one year. He was acquitted at trial, by reason of insanity, and was then involuntarily committed to St. Elizabeth's Hospital. Four years later he obtained an attorney and demanded his release from the hospital. He alleged that he was being held solely on a custodial basis, and had received no care or treatment for his condition during his entire confinement. In his opinion, the judge discussed at some length the idea that the absence of treatment might draw into ques-

tion the constitutionality of the involuntary civil commitment statute of the District of Columbia. He stated that the "indefinite commitment without treatment of one who has been found not criminally responsible may be so inhumane as to be 'cruel and unusual punishment' under the Eighth Amendment."[4] If the man had been found guilty of his crime, he would have already been released from prison. The judge concluded that the District of Columbia Hospitalization Statute created a statutory right to treatment and thus ordered St Elizabeth's to either treat the plaintiff or release him. He was subsequently released. This case provided the basis for many future mental health and mental retardation suits.

Before turning to other cases, a review of the legal and constitutional issues of danger to self, danger to others, and need for treatment or habilitation, or both, involved in civil commitments would be helpful.[5] It is analytically useful to conceive of these grounds for involuntary civil commitment falling into two distinct categories of legal theory. One theory is based on the rationale that the individual states possess certain "police powers." Essentially, this means that each state under the Bill of Rights or the Tenth Amendment has an inherent but limited right to protect the health, safety, and welfare of its citizens. This relates to the danger to self or to others concept. The second legal theory is termed the *parens patriae* concept. The *parens patriae* concept roughly translated means the state, for presumed benevolent purposes, has a right in some areas to act toward its citizens in a sovereign parental capacity for their welfare.[6]

The Fifth Amendment, the due process clause, stipulates that "no person shall be deprived of life, liberty, or property without due process of law." The due process clause is restated in the Fourteenth Amendment to the US Constitution and is thus applied to the states. In the area of threatened loss of liberty, the Supreme Court has spelled out those due process requirements which must be met. If a person is to be deprived of his or her liberty, there are three central limitations on the government's power of detention. Detention must be in retribution for a specific offense, detention must be limited to a fixed term, and detention can be permitted only after a proceeding where fundamental procedural safeguards are observed.[7] If any of these three are absent, which usually is the case in involuntary civil commitments, then there must be a *quid pro quo* to both the state and the patient when the state exercises the power of commitment. As this issue has evolved judicially, the most commonly recognized fair exchange, or *quid pro quo,* for deprivation of a person's freedom through involuntary commitment, is the requirement of rehabilitation and treatment by the state. Thus, the due process clause requires that if a patient needs treatment, then minimally adequate treatment must in fact be provided. This is the constitutional concept as enunciated in *Wyatt vs Stickney*[8] upheld by the Fifth Circuit Court of Appeals. This case required that persons, involuntarily civilly committed, who have comitted no crime, must be given treatment lest the involuntary commitment amount to an arbitrary exercise of government power.[9]

Since the due process clause requires treatment for the involuntarily committed patient, constitutionally minimum standards of adequate treatment, must therefore, be established and provided. At this juncture, psychiatrists are drawn into this highly controversial scene.

A brief resume of other significant cases related to these constitutional concepts should be noted.

In 1968 in *Nason vs Superintendent of Bridgewater Hospital,*[10] the Court held that "confinement of mentally ill persons, not found guilty of crime, without affording them reasonable treatment, raises serious questions of loss of liberty without due process of law."[11] In 1972, the Supreme Court, reviewing the case of *Humphrey vs Cody,*[12] stated that civil commitment entails a "massive curtailment of liberty" in the constitutional sense.[13] In 1971, in the case of *Wyatt vs Stickney*, the judge stated, "There can be no legal or moral justification for the State's failure to afford treatment—and adequate treatment from a medical standpoint—to the patients civilly committed to Bryce for treatment pur-

poses. To deprive any citizen of his or her liberty upon the altruistic theory that the confinement is for humane therapeutic reasons and then fail to provide treatment violates the very fundamentals of due process."[14] In this same case, the judge stated that there seemed to be three fundamental conditions for adequate treatment: (1) a humane psychological and physical environment; (2) qualified staff members in numbers sufficient to administer adequate treatment; and (3) individualized treatment plans.[15]

The *Wyatt vs Stickney* case resulted in a series of stipulations by all the parties to the law suit. The stipulation in relation to physical standards for mental hospitals and institutions reflects the American Psychiatric Association (APA) "1969 Standards for Psychiatric Facilities."[16] From a medical standpoint, however, the judge's stipulations failed to differentiate adequately between psychiatrists and all other qualified mental health professionals in assigning the primary responsibility of patient care. For example, stipulation 7 states, "Patients have a right to be free from physical restraints and isolation except for emergency situations in which it is likely that the patients could harm themselves or others and in which less restrictive means of restraint are not feasible. Patients may be physically restrained or placed in isolation only on a *qualified mental health professional's written order.*" Stipulation 26 states, "Each patient shall have an individualized treatment plan. This plan shall be developed by appropriate qualified mental health professionals including a psychiatrist." Stipulation 9 states, "Patients have a right not to be subjected to treatment procedures such as lobotomy, electroconvulsive treatment, aversive reinforcement conditionings, and other unusual or hazardous treatment procedures without their express informed consent after consultations with counsel or an interested party of the patients' choice." Here a proven effective treatment modality that in certain clinical cases is a treatment of choice, electroconvulsive therapy, is inferred to be as dangerous and of as questionable therapeutic efficacy as lobotomy.

Perhaps the most controversial issue in the stipulations is the staffing ratios. Utilizing the unit system as the means for determining staff ratio, that stipulation defines the number of staff for 250 patients. It includes psychiatrists, MDs, nurses, licensed practical nurses, aides, psychologists, social workers, and other personnel. The stipulations require two psychiatrists and four MDs per 250 patients. This contrasts with a recent survey that shows the staffing for public mental hospitals to be one psychiatrist per 70 patients.[17] Another comparison worthy of note is the APA's "1958 Standards for Psychiatric Facilities," the standards referred to in the APA's *amicus curiae* brief submitted for the *Donaldson vs O'Connor*[18] case. These standards recommend one psychiatrist per 30 acutely ill psychiatric patients and one psychiatrist per 150 chronically ill psychiatric patients. This issue of adequacy and quality of staffing still remains controversial among various mental health professional groups.

Issues and Implications

As the right to treatment issue continues to develop, there are psychiatric, medical, legal, constitutional, and social implications. The first issue is, who on an institutional staff is responsible for developing and providing adequate treatment for each patient, and how the responsibility is divided among the staff. A primary concern is, who in the community has the responsibility and the authority to decide if treatment in a given institution is adequate.The next problem is, who in the community at large has the authority and the responsibility to define what constitutes adequate care. Then, there is the important issue of who has the ultimate responsibility to pay for adequate

care. Finally, is dangerousness to self or others the only valid reason for involuntary commitment, or is the patient's welfare sufficient reason in itself?[19]

The implications of these issues are many. There are other suits, already decided or pending in many states including Texas, such as the precedent-setting *Wyatt vs Stickney*. The arena for these contests is primarily the federal courts, although some state courts are involved. Another precedent-setting case is *Donaldson vs O'Connor*, appealed to the Fifth Circuit Court of Appeals[20] and the Supreme Court.[21] In *Donaldson*, the right to treatment issue was not directly tested. However, the court did uphold, as a narrow issue, the concept of the right to freedom for nondangerous patients.[22] Texas is within the jurisdiction of the Fifth Circuit, and this ruling applies to Texas practices.

In the *Wyatt vs Stickney* decree, there is some conflict regarding the need for psychiatric leadership in the direct provision of patient care. Many of the stipulations delineate the responsibility as being that of a qualified mental health worker. This could be a psychiatrist, nurse, psychologist, or social worker. The ruling does not clarify what type of training or experience mental health personnel are required to have as minimum standards. Therefore, responsibility for care is unclear.

Decisions such as that in *Wyatt vs Stickney* will result in increased expenditures for psychiatric care.[23] There are numerous questions concerning the financial responsibility for this burden. The APA's position paper, "The Right to Adequate Care and Treatment for the Mentally Ill and Mentally Retarded," addresses this issue stating: "Implementation in most of our public hospitals for the mentally ill and the mentally retarded is immediately dependent upon the availability of significantly increased financial resources. The responsibility of the provision of these funds rests with society, and must be executed through its agencies . . . The provision of such funds by State and Federal sources is an essential next step along the road to implementation of the right . . . The American Psychiatric Association stands ready to assume its role along with other professional organizations to implement this right."[24]

The provision of such funds, whether by state or federal agencies, will probably come from tax revenues. Society is generally ambivalent about public care of its mentally ill citizens, wanting to provide care, yet reluctant to legislate the sums necessary for adequate care. The use of tax revenues for such care may be resented when other significant priorities compete with the limited revenues available.

The cost is also a factor in such care. To review the cost of hospital patient care in public institutions in Texas, the following information is available:[25] In 1940 the cost per patient per day was sixty cents; in 1956 the cost was $2.07 per day, and as of Aug 31, 1976, the average cost per day was $35.84.[26] If Texas were to have a court decision on mentally ill patient care similar to *Wyatt vs Stickney*, the cost per patient per day for state hospital inpatients in all probability would increase substantially. For the present 5,956 mentally ill patients in state hospitals this would mean increasing annual appropriations from the present $101,112,817.[27] The advocates of these programs hope that development of more adequate community mental health resources as an alternative to institutional residential care or as part of a continuation of mental health services, while initially expensive, might prove during five years to be both more humane as well as more cost effective. Many more mentally ill persons could receive outpatient services and alternative care and treatment. With more accessible alternative community mental health programs,[28] these persons could continue to be taxpayers rather than tax spenders.

With such a change there is also the expectation of a shift from the state hospitals

as they exist to primary emphasis on community-based treatment facilities including inpatient and outpatient services. The hope for this transition rests largely on the different sources of available funding. There is the likelihood that federal funding for community mental health centers will increase in the next few years. If there is increased state funding to augment or match the present federal funds and the more limited funds available from county, city, and private funds for community mental health care, then the transition to community-based care as the major resource for the mentally ill could become a reality in the future.

An issue of much interest and concern to most psychiatrists is whether an attending psychiatrist should be held *personally* liable for monetary damages if a patient does not receive adequate treatment. The APA's position on this issue is as follows: "Psychiatrists responsible for public and other mental health services are often assigned the duty of treating patients legally committed to their care, where the actual facilities and staff resources supplied by society are simply inadequate to the task. This has placed an unfair and unjust burden on these psychiatrists. Physicians are dependent upon society, through its agencies, for the provision of adequate funds and other resources necessary to meet their moral and medical responsibilities. It would be unjust and unreasonable for courts to hold psychiatrists personally and individually responsible for resource deficiencies which are actually the responsibility of society. Such decisions can only have a negative effect on the implementation and enforcement of the right to adequate care and treatment since they will deter qualified physicians from working in the very setting where they are most needed."[29]

If the suits continue unabated there is the problem of whether public mental hospitals will be able to hire personnel sufficient in both numbers and competency to implement adequate treatment. It strains the imagination to think that a psychiatrist could enter a situation in which he has been assigned responsibility for a large number of patients and then find himself personally financially responsible for the lack of adequate treatment due to the inadequacy of available public funds which prevents adequate staffing and proper facilities that meet minimum state and federal standards.

There is another implication in these issues relating to societal attitudes. Some people view involuntary commitment as essentially a deprivation of human dignity. Yet, one may wonder, what dignity is there in living alone in the community, having no friends, being unable to experience pleasureable activities, having no income, feeling unwanted and unwelcome, and being too frightened to enter into emotionally satisfying human relationships? However, no one wants to be deprived of his liberty on the arbitrary whim of a single individual. Every safeguard should be afforded by the constitution.

There are no legal criteria for determining whether a citizen of Texas is of sound mind. Instead, there are the criteria of the Texas Mental Health Code, which require a bifurcated hearing which determines (1) if the patient is mentally ill or incompetent, and (2) whether the person should be hospitalized and/or have a guardian appointed for him by the Court.[30] The whole area of civil commitment, however is in a state of legal confusion in Texas because of three conflicting cases concerning the burden of proof or amount of evidence required in such a hearing.[31]

The provisions of the Texas Mental Health Code provide for a judge (and jury if requested by the patient) to make a legal determination of mental incompetency and mental illness. For involuntary commitment there must be competent medical or psychiatric testimony to prove that such hospitalization is required for that patient. Both the Texas Constitution and Texas Mental Health Code state specifically, however, that a judicial determination that a

person is mentally ill *does not* constitute a determination that the person's legal capacity in any other regards is affected.[32] Therefore, involuntary commitment of a person to a mental hospital on proper judicial and medical grounds does not deny that patient the right to refuse any treatment offered in the institution by the staff. A second hearing is required legally that determines whether the patient needs a legal guardian appointed. Without the second judicial hearing and appointment of a legal guardian by the Court after a full hearing, the patient retains all legal rights including the right to refuse or to consent to any treatment.

The interests of everyone concerned could best be served if psychiatrists took an active role in helping to define constitutionally adequate psychiatric treatment in institutions and in the community-based facilities. Dialogue is needed to enunciate and define adequate standards by statute. It is preferable for psychiatrists and other physicians to develop standards before the fact than for the courts to impose standards after litigation. Psychiatrists, as a result of their training and experience, can serve in leadership positions to develop adequate community resources and alternatives to institutionalization. Doctors and lawyers are professionals with high ethical standards dedicated to fostering optimal care and representation for their patients or clients; they have common goals and should work together with the aim of achieving these goals.

References

1. Gaver K: Mental illness and mental retardation, the history of state care in Texas. Impact 2, 1975.

2. *Donaldson vs O'Connor*, 422 US 563, 1975; *Wyatt vs Anderholt*, 493 F 2d 507, (5th Cir 1974); *Rouse vs Cameron*, 373 F 2d 451, (DC Cir 1966); *Stamus vs Leonhardt*, 414 F Supp 439, (CDSD Iowa 1976); *Coll vs Hyland*, 411 F Supp 905, (D NJ 1976); *Doremus vs Farrell*, 407 F Supp 509, (D Neb 1975); *Wyatt vs Stickney*, 344 F Supp 373, 344 F Supp 387, (MD Ala 1972).

3. Birnbaum: Right to treatment. ABA Jour 46:499, 1960.

4. The Eighth Amendment to the US Constitution states: Excessive bail shall not be required ncr excessive fines imposed, nor cruel and unusual punishment inflicted.

5. *Maycock vs Martin*, 157 Conn 56, 245A 2d 574, cert denied 393 US 1111, 1969 (danger to self and others); *Millard vs Harris* 406 F 2d 964 (DC Cir 1968); *Fhagen vs Miller*, 328 NYS 2d 393, 278 NE 2d 615, 1972 (need for treatment and/or habilitation).

6. Peszke: Is dangerousness an issue for physicians in emergency commitment: Am J Psychiat 132:825, 1975. Peszke champions the *parens patriae* concept in support of his contention that the basic issue in emergency commitment is the patient's welfare, not his potential dangerousness.

7. *Donaldson vs O'Connor*, 493 F 2d 507, 522, 5th Cir 1974, quoting from *Powell vs Texas*, 392 US 514, 533, 1968.

8. 325 F Supp 781 (MD Ala 1971), 344 F Supp 373, 344 F Supp 387 (MD Ala 1972) *on appeal Wyatt vs Anderholt*, 493 F 2d 507, 5th Cir, 1974.

9. *Wyatt vs Stickney*, 325 F Supp 781, 784 (MD Ala 1971).

10. 353 Mass 604, 233 NE 2d 908, 1968.

11. *Id*, at 612, 913.

12: 405 US 504, 1972.

13. *Id*, at 509.

14. Note 9, *supra*, at 785.

15. 344 F Supp 373, 375 (MD Ala 1972).

16. Standards for psychiatric facilities. American Psychiatric Association, 1969.

17. APA sides with psychiatrist on appeal of Donaldson case. Psychiatric News, Feb 5, p. 20, 1975.

18. 422 US 563, 1975.

19. Recent cases emphasize that all of these factors must be considered. To state that one reason is sufficient is impossible without a complete adjudication of each fact situation, eg, *Suzuki vs Quisenberg*, 411 F Supp 1113 (D Haw 1976).

20. 493 F 2d 507 (5th Cir 1974).

21. Note 18, *supra*.

22. Note 20, *supra*, at 510, 520, 527.

23. This contention is based on the idea that present facilities are inadequate and would require an increased expenditure to meet the staffing and facility requirements of a court decree.

24. The right to adequate care and treatment for the mentally ill and mentally retarded. American Psychiatric Association, 1975.

25. Impact 4:42, 1975.

26. Hospital Monthly Report of the Central Office of the Texas Department of Mental Health and Mental Retardation, Aug 31, 1976.

27. Figures from the Budget and Financial Section, Texas State Department of Mental Health and Mental Retardation.

28. There are concerns in both the medical and legal professions that while massive discharges into the community may result in a limited restoration of civil freedom, the former patient may not be properly protected.

29. Note 24, *supra*.

30. Art 5547-31 *et seq*, Mental Health Code, VATS, 1958. Section 108 *et seq*, Probate Code, VATS, 1976 supp.

31. *Turner vs State*, 43 TLWD 4 (Nov 10, 1976) (proof required is beyond a reasonable doubt); *Powers vs State*, 543 SW 2d 194 (CA Waco 1976) (proof required is a preponderance of the evidence); *Moss vs State*, 539 SW 2d 936 (CA Dallas 1976) (proof required is clear, unequivocal and convincing proof).

32. Art 1, Section 15-a, Texas Constitution, 1975 supp; Art 5547-4 (k) and (1), Mental Health Code, VATS, 1975 supp; Art 5547-83, Mental Health Code VATS, 1958.

Webster Blocker, MD, Clinical Assistant Professor of Psychiatry, and Carla Dowben, JD, Assistant Professor in the Department of Obstetrics and Gynecology, The University of Texas Health Science Center at Dallas.

Reprint requests to Dowben at 2600 Stemmons, Suite 162, Dallas, TX 75207.

BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY

INPATIENT-OUTPATIENT

DEPARTMENT OF ADOLESCENT PSYCHIATRY

A Private 82 bed psychiatric hospital located in Oak Cliff on 18 acres amidst natural wooded surroundings. A multi-approach treatment center of neurologic and all psychiatric disorders. Treatment modalities include Somatic Therapy, Milieu Therapy, Chemotherapy, Individual and Group Therapy and Behavior Modification. Complete facilities for OT-RT under the direction of trained personnel. An individually directed program based on full diagnostic evaluation and actual performance administered by a staff skilled in special education and problems of the adolescent and young adult.

PSYCHIATRY

Jackson H. Speegle, M.D.
Fred H. Jordan, M.D.
Joseph H. Lindsay, M.D.
John T. Holbrook, M.D.

PSYCHOLOGY

George R. Mount, Ph.D.
Tom I. Payton, M.S.
Patrick R. Barnes, M.S.

DIRECTOR OF NURSES
Nita Ivey, R.N.

SOCIAL SERVICES
Beth Rutherford, M.S.W.

COURTESY STAFF

DIRECTOR OF EDUCATION
William E. Nix, Ph.D.

O.T. AND R.T. THERAPY
Director
Chequita Dian Badger, B.S.

1353 N. WESTMORELAND AVENUE, DALLAS, TEXAS 75211 **214 331-8331**

Nuclear Diagnostics

OFFERING SPECIALIZED REFERENCE SERVICE FOR RADIOASSAY PROCEDURES

AUSTRALIAN ANTIGEN
CEA
CHORIONIC GONADOTROPIN-B SUBUNIT
CORTISOL
CORTISOL, URINARY
DEHYDROEPIANDROSTERONE
DIGOXIN
DILANTIN
ESTRADIOL
ESTRIOL, TOTAL
ESTRIOL, UNCONJUGATED
ESTROGEN RECEPTORS
ESTRONE
FOLATE
FOLATE, RBC
FOLLICLE STIMULATING HORMONE
GASTRIN
GROWTH HORMONE
HCG RADIORECEPTOR PREGNANCY TEST
INSULIN
LUTEINIZING HORMONE
PLACENTAL LACTOGEN
PROLACTIN
PROGESTERONE
RENIN
TESTOSTERONE
T3 UPTAKE
T3 RIA
T4 RIA
THYROXINE, FREE
TSH
VITAMIN B-12

NUCLEAR DIAGNOSTICS
SUITE 110
7711 LOUIS PASTEUR DRIVE
SAN ANTONIO, TEXAS 78229
TELEPHONE (512) 690-8792

Randall C. Harper, M.D., FASCP
Elmore M. Averyt, M.D., FCAP
Ruskin C. Norman, M.D., FACR
Harold M. Brannan, M.D., ABNM, MACR
Fred W. Riley, Jr., M.D., ABNM, MACR
B. Mac Works, M.D., MACR
James R. Stewart, M.D., MACR
John E. Freeman, M.D., MRCP, FRCP
Joseph P. Miller, M.D., MACR

)OCTORS ARE TALKING ABOUT THE
RACTICAL WAY TO LOWER CHOLESTEROL

:holoxin®
iodium Dextrothyroxine)

id for good reasons. Diet alone doesn't ways work. CHOLOXIN® (sodium xtrothyroxine) has proved itself to be effective cholesterol lowering adjunct to et in euthyroid, non-cardiac patients. It has idergone ten years of clinical trials and eight ars of practice. The clinical trials consisted 337 clinical studies involving over 3,000 rpercholesterolemic non-cardiac patients. It is nong the most thoroughly evaluated drugs er presented to physicians.

actical, too, is the one-tablet-a-day dosage gimen. It encourages patient cooperation, and s economical for long-term therapy.

CHOLOXIN (sodium dextrothyroxine) lowers cholesterol 15% to 35%, and keeps it down with most patients. *(Data on file, Flint Laboratories).*

Interested in receiving more information about lipid lowering? Write us or contact your Flint representative. We'll be glad to supply you with a complete product portfolio and samples for your evaluation.

NOTE: See following page for full prescribing information.

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

Choloxin® (Sodium Dextrothyroxine)

Effectively Lowers Elevated Cholesterol With Convenient Once-A-Day Dosage

Four strengths 1, 2, 4, and 6 mg are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below.

	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommende
Adult Hypercholesterolemic	1.0-2.0 mg.	1.0-2.0 mg.	4.0-8.0 mg.	4.0-8.0 mg.
Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac	1.0 mg.	1.0 mg.	4.0 mg.	4.0 mg.

Choloxin®
(Sodium Dextrothyroxine)

Description

CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as O-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions

The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN (sodium dextrothyroxine) stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic end-products do not accumulate in the blood.

Indications

This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN (sodium dextrothyroxine) is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively, in patients with significant myocardial impairment. CHOLOXIN (sodium dextrothyroxine) dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications

The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease; history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings

CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN (sodium dextrothyroxine) is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN (sodium dextrothyroxine) is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN (sodium dextrothyroxine). As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN (sodium dextrothyroxine) than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN (sodium dextrothyroxine) in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may not be advisable or possible to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN (sodium dextrothyroxine) therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age

Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions

It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN (sodium dextrothyroxine) therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions

The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN (sodium dextrothyroxine); a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN (sodium dextrothyroxine) potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration

For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is approximately 0.1 mg (100 mcg) per kilogram. The initial daily dosage should be approximately 0.05 mg (50 mcg) per kilogram to be increased in up to 0.05 mg (50 mcg) per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied

CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

Case of infant botulism in Texas

Betty J. Edmond, MD; Fernando A. Guerra, MD;
Jerry Blake, MD; Sharon Hempler, MD

Botulism is currently described as a rare illness resulting from ingestion of foodstuff contaminated with a preformed neurotoxin elaborated by *Clostridium botulinum*.[1] The disease has also been described in secondarily infected wounds with toxin production *in vivo*.[2] It has been thought that the botulinus organism did not produce toxin in the human gastrointestinal tract since no case of disease had been recognized following the ingestion of fresh food.[3] In California in September 1976, however, two cases of infants with symptoms of botulism were reported, and botulinus toxin was subsequently identified in the stools.[4] Since then, four cases of infants with documented botulism have been reported by California State Department of Health personnel, who commented that these cases, recognized during a six-month period, represented the only case reports in California in the past 77 years.[5]

The following report describes a case of infant botulism in Texas.

A 6-week-old girl was admitted for evaluation of progressive weakness and weight loss over a ten-day period. She was the product of an uncomplicated pregnancy, labor, and delivery, and had been vigorously active during the neonatal course. Her present diet consisted of SMA-20 formula and cereal. Growth and development were normal. At approximately 4 weeks of age mild upper respiratory tract symptoms developed, and her diet was changed to an oral electrolyte solution for two subsequent days. During the following week the infant became progressively less active and alert. She frequently refused feedings and the mother described a depressed suck. During a four-week period, there was a 266 gm (9.5 oz) weight loss. The baby had no bowel movement for one week before admission. The only medications which the infant had received were a decongestant and saline nose drops. No other members of the family were ill.

Physical examination on admission showed the infant to be 10% dehydrated, lethargic, and profoundly hypotonic. She had a faint cry, a poor suck, and shallow respirations. On neurological examination, the pupils were dilated and reacted sluggishly to light. Facial movement was diminished and the infant was unable to swallow. Stretch reflexes were normal and Babinski responses were absent. The baby responded to touch and to painful stimuli. The only additional positive finding was that of palpable masses in the midabdomen and in the left lower abdominal quadrant suggestive of feces. A rectal examination confirmed the presence of hard stool.

Results of routine blood, urine, and cerebral spinal fluid studies and values for creatinine, serum calcium, and magnesium were normal. Findings of liver function studies consisting of SGOT, lactic dehydrogenase (LDH), alkaline phosphatase, and whole blood ammonia levels were normal. Results of thyroid function tests were normal. An immunoglobulin assay and cold agglutinin study were normal. Urine was examined for amino acids, vanillylmandelic acid, porphobilinogen, and heavy metals and was found to be normal. Routine cultures of blood, urine, stool, and cerebral spinal fluid were negative. Electroencephalography demonstrated a diffuse slowing pattern. Electromyography with nerve conduction studies could not be interpreted because of technical difficulties. Results of a prostigmine test were equivocal; however, a Tensilon test was negative. Serum and stool specimens were sent to the Center for Disease Control in Atlanta, Ga, for an assay of botulinus toxin. Type B botulinus toxin

and *C botulinum* type B organisms were isolated from the stool. No toxin was found in the serum.

During the first three days after admission, the infant remained profoundly weak. She had copious amounts of thick oral secretions which could not be swallowed. In addition, she required repeated external compression of the bladder to induce micturition. On the third day, the infant experienced an episode of hypoxia which responded well to immediate intubation and suctioning of tenacious mucous secretions. Because spontaneous respiratory effort remained diminished, the infant was maintained with mechanical ventilation for 13 days. Early in the hospitalization, continuous oral-duodenal feedings of dilute SMA formula were initiated. The feedings were tolerated for four days, at which time diarrhea, consisting of gross red blood and mucus in the stool, developed. No abdominal distention was noted and bowel sounds were hypoactive. Leukocytosis with a predominance of polymorphonuclear cells was present. Platelet count, prothrombin time, and partial thromboplastin time were normal. A roentgenogram of the kidneys, ureters, and bladder demonstrated pneumatosis intestinalis. Since the infant was believed to have clinical and roentgenographic features consistent with necrotizing enterocolitis, a 14-day course of parenteral and oral antibiotics was prescribed, with nutrition provided by parenteral hyperalimentation. Pneumatosis intestinalis was no longer evident roentgenographically after 48 hours. Feedings were reinstituted ten days after the onset of diarrhea, and progressed without complications.

Thirteen days after admission, the infant's cranial nerve functions and general strength had improved. Her clinical progress continued; she began tolerating oral feedings well, and she gained weight. After 32 days of hospitalization, the infant was discharged with mild residual hypotonia. Follow-up examinations have revealed neurologic improvement, and the baby is feeding well and gaining weight appropriately.

Discussion

As in previously reported cases of infant botulism, no other members of the infant's family were ill, and the source of the botulinus organism or toxin was not determined.[4,5] It is becoming apparent that the diagnosis of botulism in infancy depends on (1) an awareness of the symptomatology, and (2) enough suspicion to look for the source of infection. Clinically, infants with botulism consistently present with profound weakness manifested by loss of strength in neck and limb muscles, less vigorous sucking than normal, and a weak cry. They may have any combination of cranial nerve dysfunction, including ptosis, ophthalmoplegia, diminished facial expression, dysphagia with pooled oral secretions, depressed gag reflex, and poor anal sphincter tone. Deep tendon reflexes may be diminished or absent. Constipation or obstipation is a prominent clinical feature. Fever, vomiting, and diarrhea are not associated with the symptom complex unless a secondary infection has complicated the course.[6] In the case presented, it is of interest that, clinical and roentgenographic evidence of necrotizing enterocolitis developed. This entity has not been associated with botulism previously.

In conclusion, it seems appropriate to consider botulism as a significant entity in the differential diagnosis of hypotonia and weakness presenting in infancy. The treatment is primarily supportive and, consider-

ing our experience and that reported by others, the administration of antitoxin is not warranted.

References

1. Gangarosa EJ: Botulism, in: Hoeprich PD, Ed: Infectious diseases. Hagerstown, Harper and Row, 1972, ch 115.

2. Merson MH, Dowell VR, Jr: Epidemiologic, clinical and laboratory aspects of wound botulism. New Engl J Med 289:1005-1010, 1973.

3. Koenig MG, Beaty HN: Botulism in: Wintrobe GN, et al, Eds: Harrison's principles of internal medicine. New York, McGraw-Hill Book Co, 1974, ch 153.

4. Pickett J, Berg B, Chaplin E, et al: Syndrome of botulism in infancy: clinical and electrophysiologic study. New Engl J Med 295:770-772, 1976.

5. Midura TF, Arnon SS: Infant botulism; identification of clostridium botulinum and its toxins in faeces. Lancet II (7992):934-935, 1976.

6. Arnon SS, Taylor P: Botulism in infants: a new consideration for the pediatrician. Los Angeles Pediatric Society Newsletter 43(2):5, 1976.

Fernando A. Guerra, MD, 343 West Houston, Suite 406, San Antonio, TX 78205, and Santa Rosa Children's Hospital, 519 West Houston, PO Box 7330, Station A, San Antonio, TX 78285.

Betty J. Edmond, MD, Jerry Blake, MD, Sharon Hempler, MD, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284.

Comment on infant botulism

Editor's note: Botulism in infants is a recently recognized and extremely serious problem. The importance of this original report of a case in San Antonio prompted the Scientific Publication Committee to ask for the accompanying commentary by Quellin T. Box, MD, Departments of Pediatrics and Microbiology, The University of Texas Medical Branch, Galveston.

In the years 1899-1973 there were 1,784 recognized and reported cases of botulism in the United States.[1] It is likely that many other cases have gone unrecognized. The reported case fatality rate exceeded 60% until 1950. Since then the rate has slowly declined to a recent level of about 20%. Historically, botulism has been associated with a variety of problems regarding epidemiology, pathogenesis, diagnosis, and treatment. The recently recognized syndrome of infant botulism compounds these difficulties. The first confirmed case of botulism in a very young infant involved a 2½-month-old New Jersey infant and was reported in March 1976.[2] By September 1976 botulism had been reported in four California infants, all 3 months of age or less. Since then at least 15 additional cases have been identified,[3] including the case from San Antonio described in this issue of *Texas Medicine*.

Botulism in the older child or adult is suspected in clinical syndromes of symmetrical descending weakness or flaccid paralysis, beginning with muscles innervated by cranial nerves, and without fever or sensorium or cutaneous sensory impairment. Infant botulism as manifested in the few confirmed cases resembles the disease in older individuals. In infants, previously well except for constipation, there is the abrupt development within a day or two of difficulty sucking and swallowing, a marked loss of head control, and a weak cry. Generalized weakness and hypotonia recall the "floppy infant" syndrome. Other findings frequently present include ptosis, dilated pupils with slow response to light, decreased ocular mobility, lack of facial expression, depressed gag reflex, respiratory impairment, and abrupt apneic episodes. Constipation, a late occurrence in older patients, may precede other symptoms by as much as three weeks. Vomiting and diarrhea, common early in older patients, have not been features of infant botulism.

Symptoms have subsided very slowly with symptomatic and supportive care and without the use of antitoxin, except in the New Jersey case. The limited available information suggests no clinical or bacteriologic effect of systemic antimicrobial treatment. Since the organism is not invasive, an oral nonabsorbable agent may prove more effective. The extreme toxicity of botulinum toxin for humans has been thought to preclude any significant immune response; however, prolonged excretion of *Clostridium botulinum* and toxin after clinical remission in infant botulism suggests an immunologic mechanism in recovery.[3] There are as yet no reports of immunologic studies of infant botulism.

Botulinum toxin has not been detected in blood in any infant case. Diagnosis has been confirmed by finding either type A or type B *C botulinum* and the corresponding type specific toxin in feces. Electromyograms in some of the cases have shown abnormalities frequently associated with botulism in older subjects. In no case has a potential source of preformed botulinum toxin been discovered. In only one case has a likely source of *C botulinum* organisms been found. Honey, a portion of which had been fed one of the infants, was later found to be positive for *C botulinum* type B but negative for toxin.

Traditional wisdom requires that human botulism result either from ingestion of preformed toxin or absorption of toxin from wounds contaminated with *C botulinum*. The epidemiology, clinical findings, and prolonged excretion of *C botulinum* and toxin in feces in the infant cases revives speculation that in some instances human botulism represents an infection of the gastrointestinal tract, with *C botulinum* proliferating and elaborating toxin there. This pathogenetic mechanism was observed in experimental animals more than 50 years ago.[4] Infant botulism may well be more analogous to wound botulism than to the usual food-borne intoxication. Further speculation would follow that susceptibility to infant botulism suggests some unique condition in the gastrointestinal tract favorable to nidation, proliferation, and toxin production by *C botulinum*. So far, no autopsy evaluation of a recognized case of infant botulism is available.

The complete spectrum of findings in infant botulism remains to be defined by study of many more cases. Detailed information regarding the collection, storage, and shipment of critical specimens for culture and for toxin assay is available at all times by phone from the Center for Disease Control, Atlanta, Ga, as are also expert epidemiologic assistance, diagnostic consultation, and antitoxin. It seems entirely likely that this potentially lethal disease has been with us, unrecognized, all along. The tip of the iceberg has just come into view.

References

1. Botulism in the United States, 1899-1973: handbook for epidemiologists, clinicians, and laboratory workers. Atlanta, US DHEW, Center for Disease Control, 1974.

2. Botulism in 1975—United States: Morbidity Mortality Weekly Rep 25:75, 1976.

3. Arnon SS, Midura TF, Clay SA, et al: Infant botulism. JAMA 237:1946-1951, 1977.

4. Orr PF: Pathogenicity of B botulinus. J Infect Dis 30:118-127, 1922.

Quellin T. Box, MD, Departments of Pediatrics and Microbiology, The University of Texas Medical Branch, Galveston, TX 77550.

New instrument: a frozen section orientation block

J. Thom Love, Jr, MD

The new instrument described, a frozen section orientation block, is designed to aid in the communication between the surgeon and the pathologist who handles tissues for frozen section evaluation.

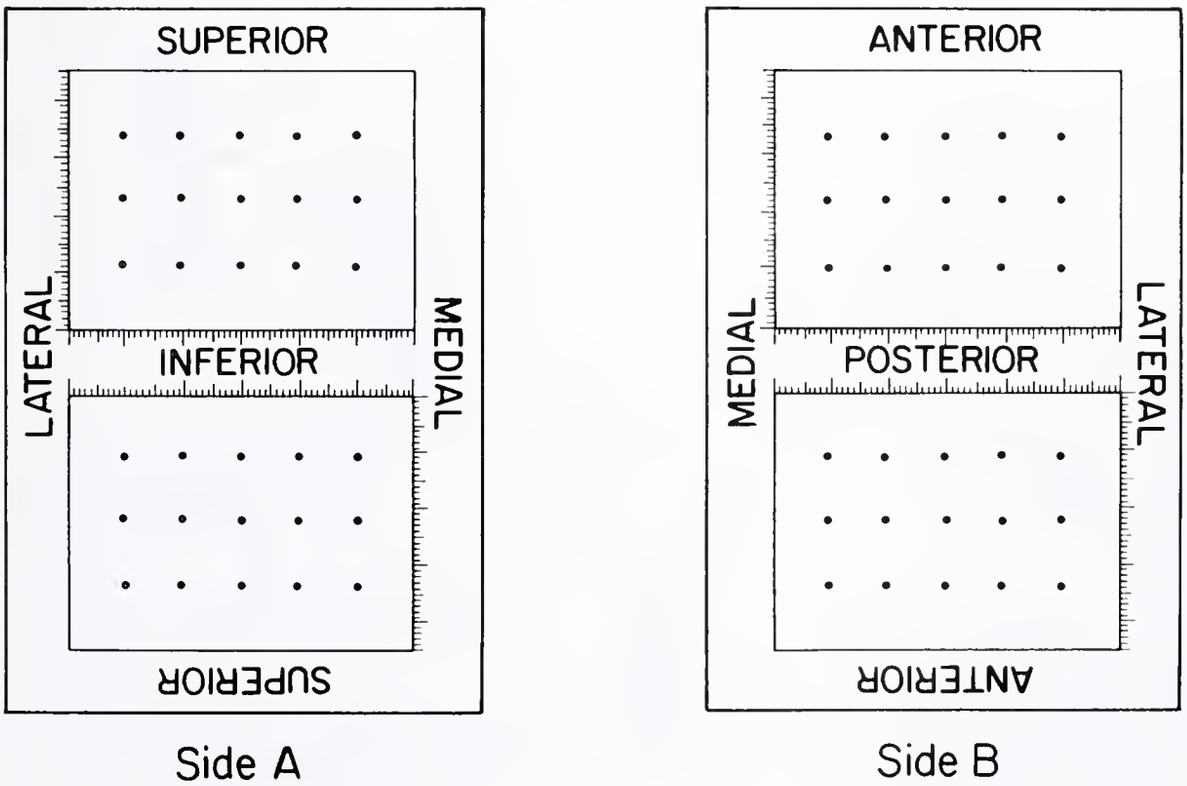
Reusable and heat resistant, this instrument is designed to permit tissue orientation with minimal manipulation and maximal control of spatial orientation.

The value of frozen section evaluation to the head and neck surgeon is universally recognized. Complete analysis of a frozen section requires precise communication between two individuals who view the same physical specimen in different circumstances.

Surgical specimens, such as strips of mucosa or skin, are removed from a three-dimensional structure but are sent to the pathologist in a two-dimensional form. Hence, the spatial orientation is lost to the pathologist, who is responsible for informing the operating surgeon that a portion of the surgical specimen is positive or negative for residual tumor. Later the surgeon may have to reapply the pathologist's findings to the parent three-dimensional structure where millimeters can mean the difference between satisfactory closure or failure to realign structures. Improper closure of an incision could involve extensive secondary reconstructive procedures.

In order to provide the pathologist with some knowledge of the orientation of the removed tissue, a surgeon may attempt to label the specimen by placing a suture in an identified location or by laying the specimen on a piece of cardboard and drawing spatial relationships between the specimen and the remaining structures. This com-

1. This illustration shows side A and side B of the frozen section orientation block.



munication process may require that the surgeon go to the frozen section lab to confer directly with the pathologist. Such a conference is often necessary, considering the multitude of errors that can occur in communication between the surgical suite and the pathology laboratory.

Description and Procedure

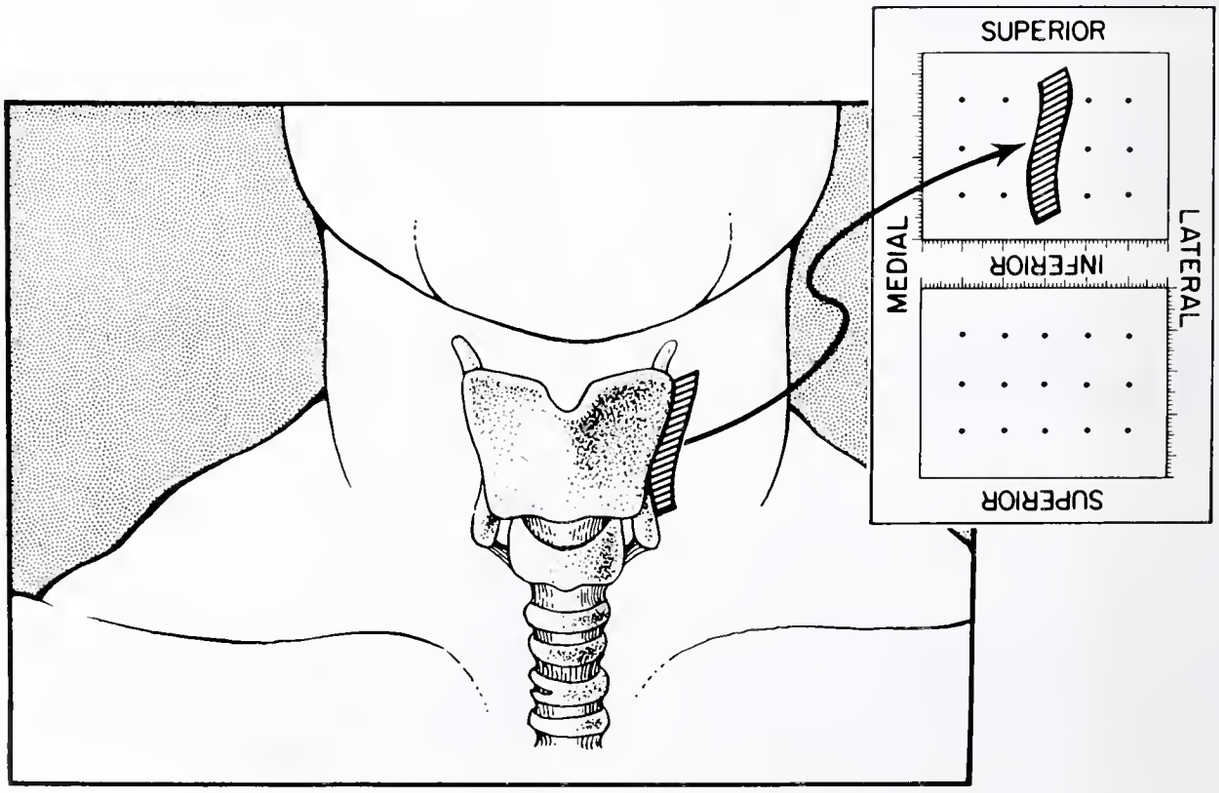
Designed to alleviate these inherent problems in communication, the frozen section orientation block is a sterilizable instrument marked so that the surgeon can orient a specimen precisely in that plane from which it was removed (Fig 1). For instance, the anterior edge of the left pyriform sinus on a laryngectomy patient (Fig 2) is attached to the block in such a manner that the pathologist can inform the surgeon of the exact spatial location of possible residual tumors. As illustrated, the superior lateral portion of the specimen as well as any other spatial orientation may be easily identified without unnecessary and repeated manipulations.

The block will also have a cutting surface for the pathologist and a metric scale so that it will be unnecessary to remove the specimen for measurement. Both sides of the block are utilized to include as many spatial combinations as possible. Perforations on the cutting surface are for suturing the specimen in place. With this device, the surgeon can physically control at least two planes of the specimen in varying combinations.

Such a tool should improve patient management and decrease the number of possible communication errors relating to frozen section evaluation.

J. Thom Love, Jr, MD, Assistant Professor, Department of Otolaryngology, The University of Texas Medical Branch, Galveston, TX 77550.

2. A diagram of the method in which a tissue specimen is oriented on the block.



The Texas Natural Death Act

Ray Farabee, LLB

"Dear Abby: I am a 54-year-old woman who wants to thank you for the best present I have ever received . . . Because of an item in your column, I sent for the Living Will. Now I have peace of mind, knowing that if I should become terminally ill, those who love me will not have to endure the agony of watching me die slowly."—from a letter to Abigail Van Buren, a syndicated columnist.

Within the past few years, national attention has focused on death. The Karen Quinlan case in New Jersey emphasized the specter of a marginal existence, controlled by machines. The tragedy of Miss Quinlan sparked the interest in Living Wills, in the development of hospital policies and committees to deal with the question of discontinuing life-sustaining procedures, and in natural death legislation.

Underlying the media event of Miss Quinlan's deterioration on a respirator, the court battle, and her survival, is the inevitable confrontation with the quality of death.

A statewide Texas poll conducted in 1976 showed that 63% of Texans believe incurably ill persons with no chance of recovery should not have life artificially prolonged, even if the decision is made by immediate relatives. An "Instapoll" conducted by the *Dallas Morning News* while natural death legislation was under consideration in the Texas Legislature in March 1977 indicated 74% of the persons questioned believe dying persons should be able to authorize doctors not to sustain life needlessly with machines.

In a poll reported in the May 1974 issue of *Medical Opinion* 79% of doctors responding to questionnaires expressed some belief in the patient's right to have a say about his own death.

But once the glossy slogans are stripped away, it is apparent that what is really at stake in the right to die debate was best expressed by Andre Hellegers, MD, director of the Joseph and Rose Kennedy Institute for the Study of Human Reproduction and Bioethics, at a national interdisciplinary seminar on death held in Washington, DC in 1976: "The basic question is unavoidable," he said. "Should health policy consist of fostering the good birth, the good life and the good death, or should it be a policy of all possible death prevention?"

Physicians and hospital employees who are directly involved in the daily life-and-death decisions responding practically to a patient's medical condition are caught in the middle. The question of whether to treat an incurable condition and what sort of treatment should be used, traditionally the province of physicians, has appeared to be threatened by the introduction of legislation in 41 states protecting natural death. For example, a Walter Reed Army Hospital surgeon cynically echoed the sentiments of many physicians in a comment quoted in *Science:* "Official guidelines will benefit only lawyers and administrators, while making it infinitely more difficult for physicians to do for the dying what most of them have been doing all along."

Needed legislation

Several factors indicated a need for some type of legislation dealing with this question. First, the representatives in the legislative mechanism have a responsibility to respond to citizens' calls for new laws. Secondly, development of modern medicine often may not allow for the close

---

Ray Farabee, LLB, Wichita Falls, was elected to the Texas Senate in 1974. Sen Farabee was the sponsor of health legislation including professional liability insurance legislation during the 64th and 65th sessions of the Texas Legislature.

doctor-patient relationship that has generally protected the wishes of a terminal patient. Also, the fact that a case such as Karen Quinlan's generated fear of liability among physicians suggested that some means be made available to protect doctors who, without protection by law, may act in peril of an expensive lawsuit.

With this backdrop of conflict the Texas Natural Death Act, which has now become state law, was drafted. In response to the problems created by the right to die movement and physicians' increased fear of exposure to civil liability, it appeared that a law which would deal effectively with the problem has to satisfy a three-fold purpose: (1) to protect the rights of those who choose not to prolong their death by life-sustaining procedures, (2) to leave the physician free to make all necessary medical decisions concerning the patient's condition, and (3) in the alternative, to allow the doctor to make the traditional decision to terminate life-sustaining procedures when warranted by the patient's condition without interference from the law.

The Texas law

The new Texas law, which became effective Aug 29, 1977, is similar to the pioneer natural death law passed in California. Since passage of the California law, natural death laws also have been passed in Idaho, Oregon, Arkansas, Nevada, New Mexico, and North Carolina.

The Act specifically states that it cannot be construed to allow mercy killing. It only permits a patient to express his wishes concerning life-sustaining treatment in the form of a written directive, and does not enlarge the power of a physician or anyone else over the patient's life.

The Act does not undertake to statutorily define death but leaves the medical determination of death in the hands of the physician.

The Act does not purport to influence or affect the current laws or procedures dealing with organ transplants, donation, unwanted blood transfusions, or the requirement of informed consent for nonemergency cases.

A final condition which limits the law's applicability is that the law has no effect unless it has been determined by a physician that the patient's death is imminent and no life-sustaining procedures can reverse it.

The Act does not impair or supersede any legal right or legal responsibility which any person may have to effect the withholding or withdrawal of life-sustaining procedures in any lawful manner. It is merely cumulative and provides for an extension of the right to decline treatment.

The Texas Natural Death Act does allow that a person who is at least 18 years of age and of sound mind may sign a directive to physicians which, in the proper circumstances, gives legal effect to the wish to avoid artificial prolongation of the dying process.

Provisions of the law

The law provides that:

1. The directive must be signed by the patient and witnessed by two persons, who are not related to the patient by blood or marriage, are not mentioned in the patient's will, and are not potential claimants to the patient's estate. The directive also cannot be witnessed by any physician, physician's employee or employee or patient of the health care facility to which the patient has been admitted.

2. The directive must be notarized, and the patient's physician must be certain of its validity before it can be given effect. Persons signing a directive should ask that it be made part of their medical record.

3. The patient must be qualified—a person diagnosed and certified in writing to be afflicted with a terminal condition by two physicians, one of whom shall be the attending physician, who have personally examined the patient.

4. If the patient is pregnant at the time the directive is to be given effect, it is invalid.

5. The directive is effective for only five years, after which a person may sign a new

one. If signed while the patient is in good health, it is merely advisory in the event of a terminal injury or illness. It may be honored only if, in the physician's judgment, the circumstances justify honoring it.

6. For the directive to be binding, the patient must be qualified and have signed or reexecuted the directive at least 14 days after being notified of his or her terminal condition. If the physician does not wish to honor the directive of such a patient, the Act requires that care of the patient be transferred to a doctor who is willing to comply with it. A physician who refuses to transfer care of a terminal patient whose directive is valid and binding may be found guilty of unprofessional conduct.

7. If the directive is honored, whether it is binding or the nonbinding sort executed while in good health, the physician is protected from civil or criminal liability unless he is found to be negligent.

8. A patient may revoke the directive at any time by destroying it, signing a written statement, or communicating to the attending physician the wish to revoke. If the physician receives a revocation from or on behalf of a patient who has previously signed a directive, each page of the directive must be marked void. If the doctor does not have actual knowledge of a revocation, he is protected from civil or criminal liability.

9. No person can be forced to sign a directive. A person who has not signed one may not be denied health care or health insurance. The directive has no effect on any insurance policy and may not limit a person's right to accept or reject health care of any kind.

10. Anyone who knowingly destroys or conceals a valid directive is guilty of a Class A misdemeanor. A person who forges or falsifies a directive or who withholds knowledge of a revocation may be guilty of unlawful homicide.

11. A directive can only be honored if it is determined that death is imminent and that life-sustaining measures will not reverse the process. The law cannot restrict administration of pain-killing drugs.

12. The directive must be identical to the form authorized by the Texas Legislature—shown on page 94.

A careful reading of the law demonstrates that its beneficial possibilities are solely in the hands of the individuals who invoke it and the physicians who are guided by it. Unfortunately, the directive cannot aid in the most difficult decision which must precede its enforcement—the determination by doctors that the fine line between prolonging life and prolonging death has been crossed.

Other states

Although natural death bills were introduced in the legislatures of 41 states only eight emerged as law. California passed the first right-to-die bill in 1976, followed by Idaho, Arkansas, New Mexico, Nevada, Oregon, Texas, and North Carolina this year. All of the new laws grant immunity to physicians acting in reliance on directives, but several are substantially different from the Texas version.

Arkansas' law provides only that a directive to physicians comply with the state's law governing wills. The law does not stipulate that the directive is invalid if the patient is pregnant, or that no one can be forced to sign a directive. Insurance rights are not protected, nor may the declarant revoke. There are no penalties set out to apply to a person falsifying a living will, and no mandatory expiration date. Further, a natural death document may be executed for a terminally ill minor or a physically or mentally incompetent adult by his or her relatives or by a legally appointed guardian.

California provided the model for the Texas law. However, the pioneer California law does not require that the directive follow a specific form, or that it be notarized. However, it does require that if the declarant is a patient at a nursing home facility, one witness must be an ombudsman appointed by state government to protect the interests of the declarant.

In Idaho the patient must have a terminal condition before signing a directive. The directive is binding. The law only requires that the patient's condition be diagnosed as terminal by one doctor, and there

DIRECTIVE TO PHYSICIANS

Directive made this_____day_____(month, year).

I _____, being of sound mind, willingly, and voluntarily make known my desire that my life shall not be artificially prolonged under the circumstances set forth below, and do hereby declare:

1. If at any time I should have an incurable condition caused by injury, disease, or illness certified to be a terminal condition by two physicians, and where the application of life-sustaining procedures would serve only to artificially prolong the moment of my death and where my attending physician determines that my death is imminent whether or not life-sustaining procedures are utilized, I direct that such procedures be withheld or withdrawn, and that I be permitted to die naturally.
2. In the absence of my ability to give directions regarding the use of such life-sustaining procedures, it is my intention that this directive shall be honored by my family and physicians as the final expression of my legal right to refuse medical or surgical treatment and accept the consequences from such refusal.
3. If I have been diagnosed as pregnant and that diagnosis is known to my physician, this directive shall have no force or effect during the course of my pregnancy.
4. I have been diagnosed and notified at least 14 days ago as having a terminal condition by _____, M.D., whose address is_____, and whose telephone number is_____. I understand that if I have not filled in the physician's name and address, it shall be presumed that I did not have a terminal condition when I made out this directive.
5. This directive shall have no force or effect five years from the date filled in above.
6. I understand the full import of this directive and I am emotionally and mentally competent to make this directive.
7. I understand that I may revoke this directive at any time.

Signed_____

City, County and State of Residence_____

The declarant has been personally known to me and I believe him or her to be of sound mind. I am not related to the declarant by blood or marriage, nor would I be entitled to any portion of the declarant's estate on his decease, nor am I the attending physician of declarant or an employee of the attending physician or a health facility in which declarant is a patient, or a patient in the health care facility in which the declarant is a patient, or any person who has a claim against any portion of the estate of the declarant upon his decease.

Witness_____

Witness_____

(After you and the witnesses have signed, each of you must sign the following acknowledgement in the spaces provided, and your signatures must be notarized.)

STATE OF TEXAS

COUNTY OF_____

Before me, the undersigned authority, on this day personally appeared_____, _____, and_____, known to me to be the declarant and witnesses whose names are subscribed to the foregoing instrument in their respective capacities, and, all of said persons being by me duly sworn, the declarant, _____, declared to me and to the said witnesses in my presence that said instrument is his Directive to Physicians, and that he had willingly and voluntarily made and executed it as his free act and deed for the purposes therein expressed.

Declarant _____

Witness _____

Witness _____

Subscribed and acknowledged before me by the said Declarant, _____,

and by the said witnesses, _____and_____,

on this_____day of_____, 19_____.

_____

Notary Public in and for _____ County, Texas

is no pregnancy clause. There are no penalties specified for concealment or falsification of a revocation or directive.

In Nevada the directive, which does not have to be notarized, can be executed while in good health or after notification of a terminal condition. However, it merely advises a physician of the declarant's wishes and is not binding. There is no mandatory expiration date.

The New Mexico law has no specified form for a directive, but it must comply with the state's law regarding wills. There is no pregnancy clause or mandatory expiration date. The penalties for concealing or falsifying a revocation or directive are strong. This state's law also provides that a directive may be executed for a terminally ill minor, but adds the following protections: there must be no indication of contrary wishes by the terminally ill minor and no opposition by a spouse or other parent, and the directive must be certified by the appropriate district judge. A guardian *ad litem* must be appointed to represent the minor's interests before the judge.

In North Carolina no penalties for concealment or falsification of a revocation or directive are set out, but the document has to be proved by a clerk or assistant clerk of a superior court. There is no pregnancy clause, and the directive is binding even if executed while the declarant is in good health. This act also contains criteria to determine death. It allows that (1) if a person is pronounced dead in accordance with the Act's "brain death" criteria, extraordinary means to prolong death may be discontinued at the request of certain relatives, and (2) if the person has donated part or all of his body in accordance with the state's anatomical gift act, life-sustaining measures may be removed.

The Oregon law is similar to the Texas law, but the directive does not have to be notarized and there is no pregnancy clause. In addition, if the patient is in a nursing care facility, one of the witnesses must be a person designated by the Department of Human Resources to determine that the declarant is voluntarily executing the directive and is of sound mind. The law also imposes civil liability for "bad faith" witnesses but only requires a physician who does not wish to comply with the directive to make reasonable efforts to transfer the patient to the care of a physician who will.

The British Health Care System

The British National Health Service (NHS) came into existence over 26 years ago on July 5, 1948. The new structure consolidated and extended many features of the pre-war system of health care provision. The NHS is best thought of as a development based on past experience rather than as a revolutionary break with tradition.

When the National Health Service came into being it operated within a three part administrative structure. Hospital and specialist care, primary care, and community care instead of being interlinked were separately administered. The system was to a large extent a formalization of the arrangements for the provision of health care which had existed prior to 1948, and it survived almost unchanged until 1974.

The three part structure

The overall responsibility for the system was vested in the Department of Health and Social Security (DHSS), then the Ministry of Health. Under this central body three separate administrative channels were created.

The Hospital and Specialist services were administered by 15 regional Hospital Boards (RHBs). These were directly responsible to the Secretary of State for the provision, coordination and planning of specialist services.

The Primary Care Services, the general medical, dental, optical and pharmaceutical services, were administered separately by 134 executive councils. The councils were the responsibility of the Secretary of State, but their and his freedom of decision was severely constrained by various Acts of Parliament.

The Community Services were provided by 175 local health authorities each reporting to the corresponding local government authorities. Actual administration was carried out by health and welfare committees. Sometimes these functions were combined in one committee.

Pressure for change

However well the three part administrative structure worked at the inception of the NHS, it became the subject of considerable criticism as time passed. The major problem was seen to lie in the treatment of chronic cases such as geriatric patients. Such patients were dependent on all three aspects of health care and therefore suffered from lack of coordination between the three strands of the administrative structure. Criticism centered around some duplicated services and some horrifying gaps.

Administrative structure

On April 1, 1974, the reformed NHS began operation.

The new system is a closely articulated, multi-tier, geographically integrated organization. Directly responsible to the Secretary of State there are 14 Regional Health Authorities (RHAs). Appointment to membership of these bodies is by the Secretary of State, the RHAs coordinate plans and supervise the smaller Area Health Authority (AHAs). They employ the staff, assess area needs and administer health facilities in their areas. They also have to develop plans for submission to the RHAs. Each AHA has a committee composed of about 20 members. The Chairman is selected by the Secretary of State. Four members come from the local authorities with the remaining members being drawn from the medical profession and other interested parties.

Each AHA is divided into between one and six districts. The district is the smallest unit in the reorganized NHS. Within each district there is a District Manage-

---

This summary of the British Health Care System was taken from *The British Health Care System,* Economic Model Limited. The book is available in the TMA Memorial Library and from the AMA.

ment Committee. The receivers of medical care are not represented here or at Area or Regional level. To overcome this problem Community Health Councils have been formed.

The reorganized General Practitioners Services are structured around the 90 AHAs. To each AHA there is a Family Practitioner Committee. This is responsible for administering all services given by the General Practitioner.

Financial characteristics

Since the birth of the NHS expenditures on health and welfare services have increased dramatically. The appearance of this phenomenon in the 1950s confounded expectations that expenditure on health would by its nature be self limiting.

It was felt that as the population grew healthier its consumption of health care would decline.

In constant 1963 prices expenditure on the NHS rose from a little under £95 million in 1960 to £1217 million in 1971.

Despite all this, the sixties ended with complaints that the NHS was failing to cope with demand. The question of inadequate finance therefore had to be raised.

The health and welfare services have been financed from central and local government sources. Of the sources of funds used to finance central government spending, the Consolidated Funds has continued to make the most significant contribution. In recent years it has averaged about 85% of the total, and its importance as a source of funds is expected to continue in the future. Given the current levels of public expenditure in the United Kingdom it is difficult to see how expenditure on the NHS can increase. It is likely that it will in fact be subject to restriction.

It is easy to find the major expenditure generators in the NHS. For example the running costs of hospitals continue to claim a high proportion of funds (about 60%). This is mainly attributable to staff salaries and wages. These costs cannot fail to increase in the future, especially with more militant staff attitudes and increased numbers. Capital expenditure on hospitals has increased substantially. It is difficult to predict how this component will behave in the future as capital expenditures may be deferred to suit central planning objectives. Of the primary care expenses, expenditure on pharmaceuticals continues to be the largest item.

Financial control of the NHS

Each year the treasury sets the overall expenditure level which the Department of Health and Social Security has to operate within.

Capital expenditure is largely concerned with the hospital section of the NHS. As expenditure on hospitals is "lumpy," since 1966 the use of a rolling plan has been instituted. This has enabled a longer planning horizon to be adopted which has helped smooth out expenditure and assign priorities. The system known as 'Control by Starts' has been introduced to assist planning in the area of expenditure.

The medical profession

The system of medical education and career patterns has remained markedly similar under the NHS to that which existed before 1948. The government left control of medical education and qualification very much in the hands of the "peers" of the profession. The system of education remains hospital based with the implication that the educational process is a selective one in which the hospitals cream off the most able young doctors for future training and the rest go into general practice.

Conditions of service in general practice

General medical practitioners contract with the Family Practitioner Committees to provide a family doctor service for all the patients registered with them. The contract is for the whole range of primary medical care. On average, a doctor has about 2,500 patients on his list. Also, on average, a doctor sees each of the patients on his list five to seven times a year and has

twice as many surgery consultations as home visits.

A doctor is responsible for providing his own premises, equipment and ancillary assistance, though some of his expenses are at least in part refundable. However, more and more doctors are choosing to work out of local government provided health centers. At the end of 1974 there were 468 health centers housing 2,500 GPs. A further 150 were in process of being built. It is clear that the GPs involved would prefer to have more direct control over health center premises. They fear that public ownership of practice premises reduces the ability of the profession to take independent action in the event of a confrontation with the government. Also there is a fear that health centres are a further move towards a salaried service.

In addition to the movement towards health center practice, there is a trend towards more and larger partnerships with 80% of general practitioners working in partnership as opposed to 48% in 1949.

A general practitioner is paid by means of a capitation fee for every patient listed as being registered with him. Additional fees are added for patients over 65 years of age, together with a variable number of fixed sums and fees for certain items of service. Additional remuneration comes from hospital work and private practice.

A GP may practice under the NHS without any significant loss of freedom beyond that required by normal financial control. He is free to accept a patient onto his list or reject him virtually without explanation. There is virtually no control over the GPs performance of his work except in so far as he indulges in "excessive" prescribing. Yet, the general practitioner is often dissatisfied. The main complaint is the open ended commitment involved in the work. The introduction of appointment systems has helped to regulate work loads but has led to considerable public criticism on the grounds that it has made it more difficult for a patient to see a doctor.

The family doctor system has to some extent become institutionalized under the NHS. It is the case that not only do patients have a personal doctor, but also GPs have a fairly genuine overall responsibility for their patients. These advantages have to be set against wastage of the skills of general practitioners over trivial cases.

Conditions of service in hospitals

Senior medical staff in the hospitals have contracts with the Regional Health Authorities. Junior hospital doctors are employed by the Area Health Authorities. Hospital doctors may contract to work either full or part time in the NHS. However only consultants (the most senior among hospital staff) on part time contracts are permitted to undertake private practice. Doctors in other grades may have part time contracts in order to hold posts in universities or other institutions.

Hospital doctors are remunerated according to graduated scales. Consultants may also receive distinction awards in addition. These awards are an attempt to recognize special ability and experience. The selection of consultants for awards is the responsibility of the Advisory Committee on Distinction Awards, a body of distinguished physicians and surgeons.

General medical services

For most receivers of health care, the gateway to the NHS is via the GP. Once this initial contact has been made the patient's particular requirements may be met by the GP, or the patient may be passed on to the hospital service, ophthalmic service, or pharmaceutical service. Thus the quality of service available to a patient is crucially dependent on the quality of his GP.

Major recent developments in the general medical service revolve around the move to group practice. Group practice allows more diagnostic techniques to be offered, and allows a certain amount of specialization to take place. However, specialization in general practice still has a long way to go.

Among the services provided by the GP, a distinct lack of preventive and diagnostic medicine is evident. As yet, the authorities have done little to encourage

the family doctor to do further work in this field, though it appears that considerable benefits would accrue to the patients. The integration of preventive medicine specialists in the reorganized NHS could help to redress the balance.

Hospital service

The hospital service provides a full range of specialist care for in-patients and out-patients. A generally made comment is that the service is orientated towards catering for acute cases and that geriatric, chronic sick and handicapped cases tend to be forgotten. A report concluded that serious inadequacies exist in the provision of care in among others the following fields: health education, early diagnoses, geriatric services, services for the chronic sick.

In the hospital service, a thorough review of the complaints procedure has been made by the Davies Committee. A list of recommendations regarding improvements to the system was made to the DHSS, but changes to procedures have not as yet been implemented. The Hospitals Advisory Service, which sends teams to examine conditions in mental and geriatric hospitals provides a useful check on the quality of treatment given in these institutions.

The consultant remains of major importance as an entry point to the hospital service for the patient. He is still the prime regulator of when patients (other than acute cases) will be treated in hospital as he decides where to place the patients' names on the waiting list.

Resource allocation

The NHS presents a clear picture of a system largely governed by non-price rationing. The basic principle underlying the NHS is that to allow the allocation of medical care to be determined to any extent by the existing distribution of income and wealth is socially unacceptable. Therefore except within the private health care sector and except for a small number of user charges within the NHS non-price allocative mechanisms operate.

Regional distribution of health care

It has recently been repeated by the DHSS that an essential feature of the NHS is that the service should be national, in the sense that the same high quality of service but not a standardized service should be provided in every part of the country. One of the greatest indictments of the pre-NHS medical system was felt to be the geographical maldistribution of the manpower and resources which characterized it. In the 26 years since the NHS was created there has been some levelling up of areas which were medically improverished before 1948. Further levelling up of resources, particularly of trained staff is needed—especially in the Midlands and the North—to provide the same high quality of service all over England. There are also unjustifiable differences between the average standards of care provided for long stay hospital patients—the elderly, the mentally ill and handicapped—and the standards of care provided for short stay hospital patients. In the services paid for from the local rates, standards of service also differ because of the differing priorities local authorities gave to their local services prior to 1974.

Functional resource allocation in the NHS

Perhaps the most striking feature of the NHS as a system for allocating scarce resources among different functions is the almost total lack of objectives, publicly stated in a form such that performance can be measured against them, or programs for action systematically appraised. Consequently there is no apparent system whereby rival claims on scarce resources can be evaluated.

The assumption which underpins much of the discussion of resource allocation is that the need for medical care is a clearly defined unity which it is the duty of the NHS to satisfy. The implication of this is that it is merely required to be proved that a particular issue concerns medical need, for the "needed" resources to be provided. There is rarely serious dis-

cussion of priorities, and little recognition of the fact that decisions concern not so much the identification of medical need but the distribution of scarce resources between different medical needs.

Also implied by the assumption of the definability of medical need is the idea that needs currently being satisfied make up the bulk of needs which ought to be satisfied.

There is also evidence that the NHS may be showing a bias towards elaborate, specialized and technologically advanced types of care and neglecting less glamorous care.

The private sector

Recourse to private treatment is not uniform across the medical spectrum. It is more prevalent in the hospital service than in the general practitioner service. Essentially, on payment of a money price, the non-price rationing mechanisms of the NHS can be circumvented. Growth in group insurance schemes appears to be responsible for most of the private sectors recent growth. Firms find it advantageous to be able to plan for the hospital episodes of their key executives and also regard it as an attractive fringe benefit. The ability to evade lines and to upgrade the quality of hospital "hotel" facilities appear to be the main motivations for purchasing private treatment. Thus the private sector is offering convenience to the consumer who is prepared to pay for the privilege rather than acting as a true safety valve for the NHS.

Charges in the NHS

Charges are found in the pharmaceutical service, the dental service, and the ophthalmic service. At the present time these charges bring in a revenue equal to about 5% of the total cost of the Health and Welfare services. The use of charges to reduce expressed demand for medical care has in general been very unpopular with all sections of the community. This includes the health professionals principally affected by the charges. Their objections could be based on the fact that being paid on a fee-per-item basis, any reduction in demand has an effect on their income.

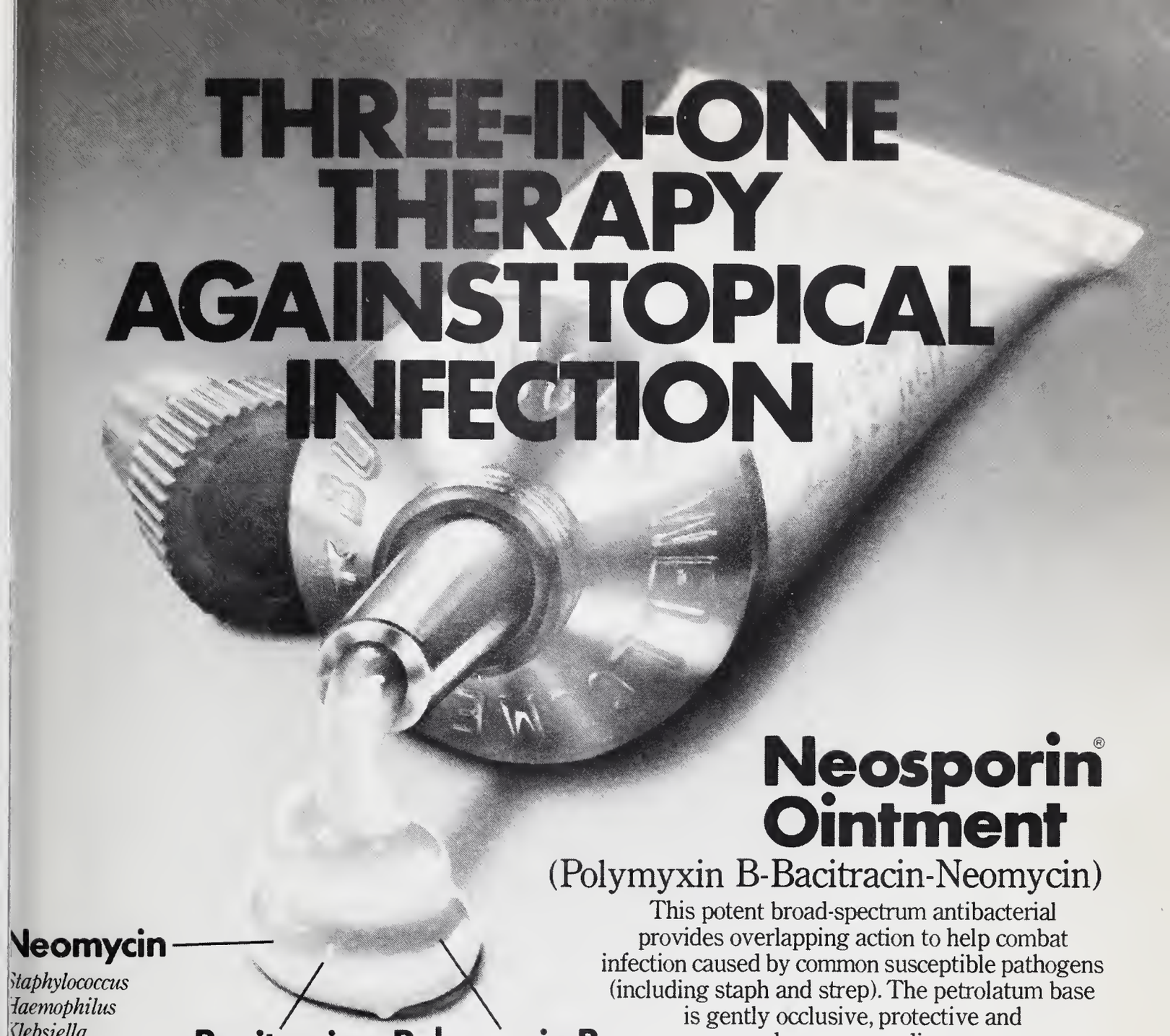
The choice of which services are to be subject to charges is partly due to historical factors. These items most exceeded the cost estimates made by planners at the birth of the NHS.

Consumer's influence

The consumer is now in a far better position to make health service personnel accountable for their actions than was the case before reorganization. A more open style of administration has occurred, with peoples' roles in the reorganization being clearly defined. This open style should allow the consumer more access to officials and therefore to information about the health services.

Community Health Councils have been established to advise the consumer on his rights in the NHS and where best to take any grievances. They should also allow consumers to make their views felt as regards the service that is provided and any planned modifications to it.

THREE-IN-ONE THERAPY AGAINST TOPICAL INFECTION



Neosporin® Ointment

(Polymyxin B-Bacitracin-Neomycin)

This potent broad-spectrum antibacterial provides overlapping action to help combat infection caused by common susceptible pathogens (including staph and strep). The petrolatum base is gently occlusive, protective and enhances spreading.

Neomycin
Staphylococcus
Haemophilus
Klebsiella
Aerobacter
Escherichia
Proteus
Corynebacterium
Streptococcus
Pneumococcus

Bacitracin
Staphylococcus
Corynebacterium
Streptococcus
Pneumococcus

Polymyxin B
Pseudomonas
Haemophilus
Klebsiella
Aerobacter
Escherichia

In vitro overlapping antibacterial action of Neosporin® Ointment (polymyxin B-bacitracin-neomycin).

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Neosporin® Ointment

Polymyxin B-Bacitracin-Neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

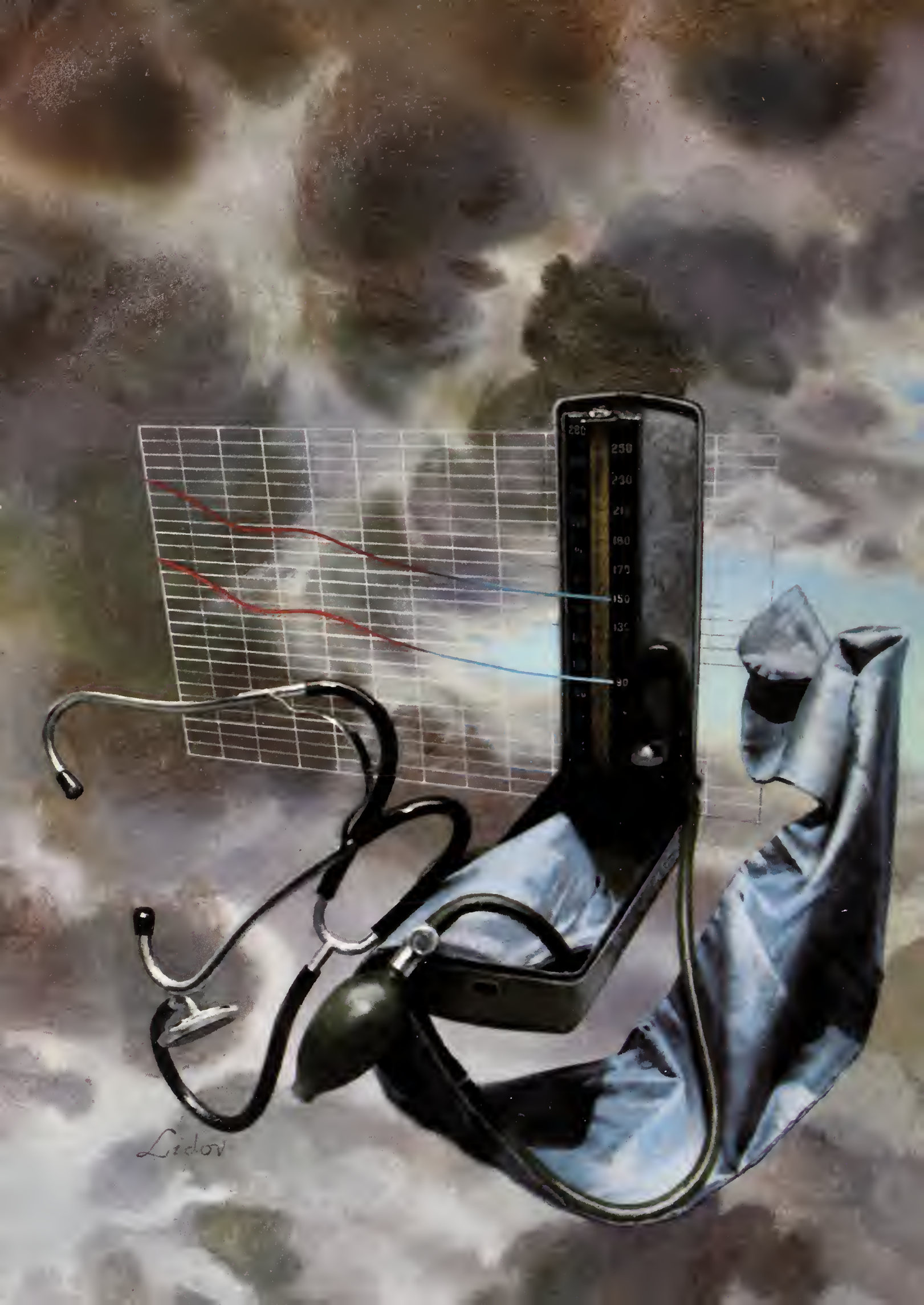
WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.


250
230
150
90
Lidov

When choosing a diuretic for day-in-day-out hypertension control with comfortable compliance...

The agent you choose in mild to moderate essential hypertension should offer (1) long-term effectiveness, (2) patient comfort, and (3) compliance.

Zaroxolyn offers all three.

Effectiveness: In several long-term studies[1,2,3] Zaroxolyn brought moderately elevated blood pressure (average 167/113 mm Hg) down to the range of normotension—and held it there for up to four years.

Comfort-in-use: One investigator noted, "Patient cooperation was surprisingly good for a study of such duration. The once-daily schedule with metolazone (Zaroxolyn) no doubt contributed to patient compliance."

Overall compliance with Zaroxolyn is good—very good. An analysis of controlled clinical studies involving 188 Zaroxolyn patients showed that only eight discontinued therapy because of side effects. That's a discontinuation rate of only 4.3%, and broader clinical experience appears to substantiate this low rate.[3]

Long-acting

Zaroxolyn®

(metolazone) Pennwalt

2½ mg, 5 mg and 10 mg tablets

once-daily antihypertensive diuretic

Recommended initial dosage in mild to moderate essential hypertension–2½ to 5 mg once daily

Before prescribing, see complete prescribing information in the package insert, or in PDR, or available from your Pennwalt representative. The following is a brief summary. **Indications:** Zaroxolyn (metolazone) is an antihypertensive diuretic indicated for the management of mild to moderate essential hypertension as sole therapeutic agent and in the more severe forms of hypertension in conjunction with other antihypertensive agents. Also, edema associated with heart failure and renal disease. **Contraindications:** Anuria, hepatic coma or precoma, allergy or hypersensitivity to Zaroxolyn. Or, as a routine in otherwise healthy pregnant women. **Warnings:** In theory cross-allergy may occur in patients allergic to sulfonamide-derived drugs, thiazides or quinethazone. Hypokalemia may occur, and is a particular hazard in digitalized patients; dangerous or fatal arrhythmias may occur. Azotemia and hyperuricemia may be noted or precipitated. Considerable potentiation may occur when given concurrently with furosemide. When used concurrently with other antihypertensives, the dosage of the other agents should be reduced. Use with potassium-sparing diuretics may cause potassium retention and hyperkalemia. Administration to women of childbearing age requires that potential benefits be weighed against possible hazards to the fetus. Zaroxolyn appears in the breast milk. Not for pediatric use. **Precautions:** Perform periodic examination of serum electrolytes, BUN, uric acid, and glucose. Observe patients for signs of fluid or electrolyte imbalance. These determinations are particularly important when there is excessive vomiting or diarrhea, or when parenteral fluids are administered. Patients treated with diuretics or corticosteroids are susceptible to potassium depletion. Caution should be observed when administering to patients with gout or hyperuricemia or those with severely impaired renal function. Hyperglycemia and glycosuria may occur in latent diabetes. Chloride deficit and hypochloremic alkalosis may occur. Orthostatic hypotension may occur. Dilutional hyponatremia may occur in edematous patients in hot weather. **Adverse Reactions:** Constipation, nausea, vomiting, anorexia, diarrhea, bloating, epigastric distress, intrahepatic cholestatic jaundice, hepatitis, syncope, dizziness, drowsiness, vertigo, headache, orthostatic hypotension, excessive volume depletion, hemoconcentration, venous thrombosis, palpitation, chest pain, leukopenia, urticaria, other skin rashes, dryness of mouth, hypokalemia, hyponatremia, hypochloremia, hypochloremic alkalosis, hyperuricemia, hyperglycemia, glycosuria, raised BUN or creatinine, fatigue, muscle cramps or spasm, weakness, restlessness, chills, and acute gouty attacks. **Usual Initial Once-Daily Dosages:** mild to moderate essential hypertension—2½ to 5 mg; edema of cardiac failure—5 to 10 mg, edema of renal disease—5 to 20 mg. Dosage adjustment may be necessary during the course of therapy. **How Supplied:** Tablets, 2½, 5 and 10 mg

References:

1. Dornfeld L, Kane R: Metolazone in essential hypertension. The long-term clinical efficacy of a new diuretic. *Curr Ther Res* **18**:527-533, 1975.
2. Cangiano JL: Effects of prolonged administration of metolazone in the treatment of essential hypertension. *Curr Ther Res* **20**:745-750, 1976.
3. Data on file: Medical Department, Pennwalt Prescription Products

PENNWALT

Pennwalt Prescription Products
Pharmaceutical Division
Pennwalt Corporation
Rochester, New York 14603

COLBY PROCLAIMS WOMAN SUFFRAGE

Signs Certificate of Ratification at His Home Without Women Witnesses.

MILITANTS VEXED AT PRIVACY.

Wanted Movies of Ceremony, But Both Factions Are

WASHINGTON, Aug. 26, 1920—

Social Security Bill Is Signed; Gives Pensions to Aged, Jobl

Roosevelt Approves Message Intended to Benefit 30,00 Persons When States Adopt Cooperating Laws–He C the Measure 'Cornerstone' of His Economic Progra

WASHINGTON, Aug. 14, The Social Security Bill, pr a broad program of unempl insurance and old age pe and counted upon to benef 20,000,000 persons, became day when it was signed by dent Roosevelt in the pres those chiefly responsible f ting it through Congress.

Mr. Roosevelt call[illegible] "the cornerstone in a st which is being [illegible] me[illegible]

SENATE APPROVES 18-YEAR OLD VOTE IN ALL ELECTIONS

Amendment to Constitution is Sent to House, Where Passage is Expected

WASHINGTON, March 10, 1971—The Senate approved today, 94 to 0, and sent [illegible]

JUL SIGNI the Draf Ends No

TRUMAN CLOSES ITED NATIONS CONFEREN WITH PLEA TO TRANSLATE CHARTER INTO DEEDS

NEW WORLD HOPE

President Hails 'Great Instrument of Peace,' Insists It Be Used

HISTORIC LANDMARK

Meeting Gives Standing Ovation as Executive Pictures Peace Gain

"If we fail to use it," he declared to the solemn final meeting of the delegates, 'we shall betray all of those who have died in order that we might meet here in freedom and safety to create it.'

"If we seek to use it selfishly—for the advantage of any one nation or any small group of nations—we shall be equally guilty of that betrayal."

Fervent Interpolation

The President, speaking in the auditorium of the War Memorial Opera House, built in memory of sons of the Golden Gate city who gave their lives in the first World War, in which he himself served, seemed to give unconscious expression to the solemn feeling of the occasion when, at the outset of his speech, he interpolated the words, half a hope, half a prayer:

"Oh, what a great day this can be in history!"

Just before the plenary session the President, accompanied the

WASHINGTON, Jan. 27, 1973—"With the signing of the peace agreement in Paris today, and after receiving a report from the Secretary of the Army that

PATIENT PACKAGE INSERTS: A CONCEPT WHOSE TIME HAS COME?

The consumer's right to know is an irreversible and desirable trend of the Seventies. It extends, and properly, to a patient's right to know more about his or her prescription medications. One way, gaining favor, is through patient package inserts. Wisely-prepared and properly distributed when medically indicated, they could markedly improve patient knowledge and drug therapy—laudable goals by anyone's standards.

The PMA endorses these goals and will work with government, the health professions and consumers to achieve them.

The Advantages

The concept holds promise of benefits: better patient understanding of the product prescribed, better adherence to the treatment plan, and more awareness of possible side reactions.

Every doctor has had patients who fail to finish antibiotic regimens because they feel better. Some patients assume that if one tranquilizer or analgesic is good, two may be twice as good. Still others fail to report dizziness while on antihypertensive therapy —and so on.

Problems like these might arise less often if the patient received written information in addition to verbal instructions. Some studies suggest that patients are more receptive to such materials, and they more often understand the verbal instructions and follow them, when inserts are used.

The Disadvantages

There are also some potential problems. Obviously, the inserts must be clearly phrased, without extraneous or complex detail. How much information is enough? How can it be kept current? Should all patients receive the same information? Should inserts be included with all drugs? Should only potential problems be listed or are patients better off with a "fair balance" presentation that describes usefulness as well as drawbacks?

These and similar questions require answers, since model inserts have yet to be properly developed and tested. Despite the need for these studies, the FDA is proceeding prematurely with inserts on selected products. We think the Congress is the only place where the matter can be given the proper legal status and direction, particularly since it represents a conceptual change in the legal, medical and social framework of the nation's prescription drug information system.

The Solution

The PMA believes that carefully-devised pilot studies of various kinds of inserts are needed. They should be developed and implemented with full participation by doctors, pharmacists, consumers, communications experts and the drug industry. Such studies will provide reliable pathways to follow, so that inserts will be useful aids to medical practice.

And particularly we think that you should be closely involved in this debate and in these studies and decisions. Otherwise, people with less experience and qualifications may control the purposes, content and use of a tool with considerable promise for improved patient care. It could make a difference in your practice tomorrow, and more importantly, in the health of your patients.

PMA
THE PHARMACEUTICAL MANUFACTURERS ASSOCIATION
1155 FIFTEENTH ST., N. W., WASHINGTON, D. C. 20005

Medical Newsmakers

JOHN C. HUNDLEY, MD, is the 1977 recipient of the Texas Pharmaceutical Association Distinguished Service Award. Dr Hundley, a Fort Stockton family practitioner for 23 years, was chosen for his interprofessional service as a Councilor for the Texas Medical Association and as a member of the Texas Pharmaceutical Association's Ad Hoc Committee on Pharmacy Practice Standards. He has served as the Texas Academy of General Practice Coordinator of Postgraduate Training, alternate delegate to the American Academy of Family Practice, and a past president of the Big Bend County Medical Society.

The American Heart Association has awarded grants to five scientists at the Texas Tech University School of Medicine in Lubbock, to explore the development and functioning of the heart. Grant recipients and projects are: JAMES M. CAMERON, PhD, for development of instrumentation for the measurement of oxygen uptake in the microcirculation; JOHN B. LOMBARDINI, PhD, for exploration of the effects of taurine and isethionic acid in heart rhythm regulation; LORENZ O. LUTHERE, PhD, MD, for study of the influence of thyroid hormones on the effect of catecholamines, hormones such as epinephrine, which control the amount of blood pumped by the heart as well as its distribution to various areas of the vascular system; ROGER R. MARKWALD, PhD, for study of the order of formation of cells which evolve into the connective tissues of the heart; and, RICHARD D. NATHAN, PhD, for study of changes in the electrical properties which initiate spontaneous fetal heart beats.

C. FRANK WEBBER, MD, has been named the first chairman of the department of family practice at The University of Texas Health Science Center in Houston. Dr Webber, director of medical education for the Houston Memorial Hospital System, also serves as a member of the Executive Board of the Harris County Medical Society and a delegate to the Texas Medical Association. He is past president of the Harris County Academy of Family Physicians, a charter fellow of the American Academy of Family Practice, and a diplomate of the American Board of Family Practice.

The University of Texas System has announced that two medical administrators, R. LEE CLARK, MD, and TRUMAN G. BLOCKER, MD, will be retiring. Dr. Clark will retire after more than 31 years as president of The Universtity of Texas System Cancer Center in Houston. Dr. Blocker was called out of retirement by the UT Board of Regents last February to head the Houston Health Science Center in an acting capacity. Dr Blocker is president emeritus of the UT Medical Branch at Galveston.

JOAN B. MARTIN, sophomore student at The University of Texas Health Science Center at Houston Medical School, has received special recognition for her "outstanding services to the community." She was presented the award by CIBA, a national pharmaceutical firm, which each year recognizes a sophomore medical student at each

accredited medical school who has performed special, extracurricular community service.

WILLIAM J. MANGOLD, JR, MD, San Antonio, was elected vice chairman of the American Medical Association Council on Legislation. Dr Mangold is a resident member of the council.

A Floresville doctor, SAM A. NIXON, JR, MD, has been named the new director of the Division of Continuing Education for The University of Texas Health Science Center at Houston. Dr Nixon is chairman of the State Rural Medical Education Board, director of the American Social Health Association, chairman of the TMA Council on Communication, and speaker of the Congress of Delegates of the American Academy of Family Physicians.

Texas State Representative GEORGE T. "MICKEY" LELAND, Houston, has joined Hermann Hospital as director of Special Development Projects. He will be working to secure funds for such special Hermann projects as the Rooftop Terrace for The Children's Center, the expansion of the Hermann Neuro Unit, and the establishment of a Burn Center at the hospital.

GERALD S. GOLDEN, MD, a pediatric neurologist, has assumed the position of director of the child development division at The University of Texas Medical Branch in Galveston. In his new position, Dr Golden will participate in and support research in the area of the effect of seizures on the intellectual development of children, the drugs to treat seizures, and Tourette's Syndrome. Dr Golden is a member of the American Academy of Pediatrics, American Academy of Neurology, Association for Research in Nervous and Mental Disease, American Association of University Professors, Child Neurology Society, and the International Association for Child Neurologists.

Commissioner of the State Department of Public Welfare, RAYMOND W. VOWELL, has announced his retirement from the position he has held for six years. Since his involvement in state government began in 1951, Vowell has been director of special schools, and later executive director, of the Board for Texas State Hospitals and Special Schools, superintendent of The Austin State School, and vice chancellor for public affairs of The University of Texas System.

MORVEN EDWARDS, MD, post doctoral fellow in pediatrics at Baylor College of Medicine, has received one of the first two Venereal Disease Research Training Fellowships awarded by the Venereal Disease Research fund of the American Social Health Association. The one-year fellowship will enable Dr Edwards to continue her training through study of group B Streptococcal disease.

MEDICINE AND THE LAW

HB 1048 IMPLEMENTS MEDICAL MATTERS RECOMMENDATIONS OF THE TEXAS MEDICAL PROFESSIONAL LIABILITY STUDY COMMISSION

The Texas Medical Liability and Insurance Improvement Act, HB 1048, went into effect Aug 29, 1977. Several important aspects of this legislation directly affect every physician in Texas, and it is the purpose of this article to highlight the new changes in the medical aspects of the law. This article will note the extent to which the recommendations of the Texas Medical Professional Liability Study Commission relating to the practice of medicine were finally enacted into law. No discussion of the tort reform and insurance aspects of the new law are included.

Medical recommendations

The medical recommendations of the study commission were developed by the commission's Subcommittee II chaired by Milton V. Davis, MD, Dallas. This subcommittee was charged by chairman Page Keeton with analyzing the health care aspects of the medical malpractice problem and recommending changes in this area. The recommendations of this subcommittee, contained in its final report[1] were adopted by the full commission in its final report[2] to the Texas Legislature. Without exception, all of the recommendations of the subcommittee were enacted into law.

The new malpractice law gives the State Board of Medical Examiners additional power to deny an application for a license or other authorization to practice medicine and to discipline a physician who has been adjudged by the board of professional failure to practice medicine in an acceptable manner consistent with public health and welfare or who has repeated or recurring meritorious health care liability claims which in the opinion of the Board evidence professional incompetence likely to injure the public.[3] The new law also gives the State Board of Medical Examiners disciplinary power when it adjudges a physician to have been "removed, suspended or having disciplinary action taken by his or her peers in any professional medical association or society . . . or of being disciplined by a licensed hospital or the medical staff of a hospital, including removal, suspension, limitation of hospital privileges, or other disciplinary action if that action in the opinion of the board was based on unprofessional conduct or professional incompetence which was likely to harm the public . . .".[4]

The new language mirrors the concerns of the study commission which had noted that there was some question as to the Board's existing disciplinary powers over negligence or incompetence that was unrelated to disease, mental illness, drug abuse, or alcohol abuse. The Texas Legislature rejected the idea that discipline should be imposed simply on the grounds of a single act of alleged negligence.

Additional disciplinary powers

To the extent that the Board of Medical Examiners finds any person to have committed any of the acts set forth in the preceding paragraph, the new law provides the Board with seven additional specific disciplinary powers.[5] Depending on the nature of the case, the Board may now enter an order imposing one or more of the following: 1) deny the person's application for a license or other authorization to practice medicine; 2) administer a public or private reprimand; 3) suspend, limit, or restrict the person's license or other authorization to practice medicine, including limiting the practice of the person to or by the exclusion of one or more specified activities of medicine; 4) revoke the person's license or other authorization to practice medicine; 5) require the person to submit to care, counseling, or treatment of physicians designated by the State Board of Medical Examiners as a condition for initial, continued, or renewal of license or other authorization to practice

medicine; 6) require the person to participate in a program of education or counseling prescribed by the board; or 7) require the person to practice under the direction of a physician designated by the board for a specified period of time.[6]

In addition, the new law provides that "if the Board determines . . . that a person licensed to practice medicine . . . by his continuation in practice would constitute an immediate danger to the public, the board, on a majority vote of the members and compliance with other matters may temporarily suspend the license of that person without notice or hearing on the complaint . . .".[7]

All of the new disciplinary powers noted above were originally recommended by the Texas Medical Association.

Responding to recommendations of the TMA for additional powers and protections to increase the capability for medical societies, hospital staffs, and physician organizations to police themselves, HB 1048 makes it clear that any medical peer review committee including medical society and any physician licensed to practice medicine in Texas may report with immunity relevant facts to the Board of Medical Examiners. The reports are to include acts of any physician in Texas that reasonably raise a question with respect to his or her competency.[8]

Similarly a medical society that takes formal disciplinary action against a member relating to professional ethics, medical incompetency, moral turpitude, or drug or alcohol abuse may with immunity report to the board the name of the member, together with the pertinent information relating to the action.[9] The fact that a report has been filed with the Board will not preclude any action by a hospital or other health care facility or professional society to suspend, restrict, or revoke the privileges or membership of the physician.[10]

A physician will be entitled to examine any report regarding the physician that may be submitted to the Board.[11] The physician also will have the right to place into the record a statement of reasonable length of his view with respect to any information existing in the report.[12] On a determination by the Board that a submitted report is without merit, the report will be expunged from the physician's or applicant's individual historical record in the Board's office.[13] A person against whom disciplinary action is taken pursuant to the new law will have the right of judicial appeal, provided that the physician may not be allowed to practice medicine in violation of any disciplinary order of the Board while the appeal is pending unless stayed by the district judge.[14]

Confidential reports

Reports, information, or records received and maintained by the Board under this act are to be strictly confidential in nature with four specific exceptions.[15] These exceptions relate to Board disciplinary hearings court orders, and research purposes.[16] Actual Board orders relating to disciplinary action against a physician are not confidential.[17]

However, no records and reports received, maintained or developed by the Board will be available for discovery or court subpoena or introduced into evidence in a medical malpractice suit.[18] Anyone found guilty of an unlawful disclosure of any confidential information possessed by the Board will be guilty of a Class A misdemeanor.[19]

The need for maintaining the confidentiality of Board information was first identified by the TMA, and the Legislature saw the need for granting immunity to those who provide the Board with needed information.

As a result, HB 1048 provides that a person who reports or furnishes information to a medical peer review committee, and a member, employee, or agent of the committee, who makes a report or other information available to the board, or who assists in the organization, investigation, or preparation of this information, or who assists the Board in carrying out its duties, will be immune from civil liability.[20]

Malpractice insurance information

The malpractice insurance crisis solutions were hampered by a lack of pertinent information on the problem, and the TMA rec-

ommended that this problem needed to be rectified in the future. HB 1048 attempts to address this concern by requiring every insurer who provides medical professional liability insurance covering a Texas physician to submit to the Board of Medical Examiners certain information dealing with malpractice complaints.[21]

The language of this provision requires no attention from most physicians, but the law states that "in the event a physician practicing medicine in this state does not carry or is not covered by medical professional liability insurance, or is insured by a nonadmitted carrier, the information required to be reported in Subsections (b) and (c) of this section shall be the responsibiilty of the physician."[22]

The law provides that there shall be no liability on the part of an insurer who reports any of the complaint information required by the law.[23] Also, none of the information required to be submitted can be used in any way or offered in evidence in the trial of a malpractice suit against a physician.[24]

Reporting requirements

The remaining provisions of the new law entail two more reporting requirements. Whenever any physician is convicted of a felony under Texas law, the clerk of the court of record is required to report to the Board of Medical Examiners an abstract of record of the court.[25]

The Board is to report within 30 days the restriction, suspension or revocation of a physician's license or other disciplinary action by the board against a physician to the appropriate health facilities and hospitals, professional societies of physicians in Texas, and any entities responsible for the administration of Medicare and Medicaid in Texas.[26]

All of the provisions of the new law are in addition to other laws relating to medical disciplinary powers and procedures of the Texas State Board of Medical Examiners.[27]

HB 1048 does not contain any of the following ideas: 1) separating the examination, licensing and disciplinary activities of the Board of Medical Examiners; 2) adding non-physician members to the Board; 3) mandatory continuing education for all physicians; 4) providing for periodic relicensing of physicians; 5) prohibiting physicians from holding financial interests in hospitals and other health care facilities.

District review committees

A separate section of HB 1048 attempts to provide additional support to the Board of Medical Examiners.[28] The Board has now been given the power to establish a reasonable number of "district review committees" in order that it may conduct its affairs in a more flexible manner.[29] The Board will determine the geographic composition of the districts, and each district review committee will be composed of three persons appointed by the Governor from among persons who have resided and practiced medicine in the district for more than three years before their appointment.[30] Each member of each committee, except for initial members, will be appointed by the Governor for a term of six years.[31]

Vacancies in the membership of a committee will be filled by the Governor by appointment, and each committee member will receive the per diem and expenses provided for Board members.[32] Each member of a district review committee will be subject to the law and rules of the Board as if he were a member of the Board, but no committee will exercise final authority over the disposition of a complaint against a person licensed by the Board or issue a final order or rule.[33] All final authority remains vested in the Board.[34] The idea for establishing district review committees was that of the TMA.

Conclusion

The 65th Texas Legislature made substantial improvements in the capability of the medical profession and the State Board of Medical Examiners to deal with the medical aspects of the medical malpractice insurance crisis.

The physicians of Texas should familiarize themselves with the provisions of the new law.

Finally, the work of the TMA Council on Medical Legislation, TMA physician members and officers, the work of Milton V. Davis, MD and E. Don Webb, MD, the Texas Medical Professional Liability Study Commission, and the members of the Texas Legislature should not go unacknowledged. The final product of their efforts has produced a model for dealing with the medical malpractice insurance crisis.

Ace Pickens, William Wade*
Brown, Maroney, Rose, Baker & Barber
TMA General Counsel
*William Wade was staff assistant to the Texas Medical Professional Liability Study Commission

---

[1]Report of Subcommittee II, Medical Professional Liability Study Commission, State of Texas, 1976.

[2]Final Report of the Texas Medical Professional Liability Study Commission to the 65th Texas Legislature, December, 1976.

[3]Section 2.11, Subchapter B, Part 1, H.B. 1048, 65th Texas Legislature, Regular Session, 1977.

[4]Id.

[5]Id. at Section 2.12.

[6]Id.

[7]Id. at Section 2.13.

[8]Id. at Section 2.02.

[9]Id. at Section 2.03.

[10]Id. at Section 2.04.

[11]Id. at Section 2.05.

[12]Id.

[13]Id.

[14]Id. at Section 2.14.

[15]Id. at Section 2.06.

[16]Id.

[17]Id.

[18]Id.

[19]Id.

[20]Id. at Section 2.07.

[21]Id. at Section 2.08.

[22]"(b) The following report or data shall be furnished to the board within 90 days after receipt by the insurer of the complaint from the insured:

"(1) the name of the insured;

"(2) the policy number;

"(3) the policy limits;

"(4) a copy of the complaint;

"(5) a copy of the answer; and

"(6) other pertinent data and information within the knowledge of the insurer as the board may require.

"(c) The following report or data and information shall be furnished to the board within 90 days from a judgment, dismissal, or settlement of suit involving the insured, or settlement of any claim on behalf of the insured without the filing of a lawsuit:

"(1) the date of a judgment, dismissal, or settlement;

"(2) whether an appeal has been taken and by which party;

"(3) the amount of the settlement or judgment against the insured; and

"(4) other pertinent information within the knowledge of the insurer as the board may require."

[23]Id.

[24]Id.

[25]Id. at Section 2.09.

[26]Id. at Section 2.10.

[27]Id. at Section 2.15.

[28]Subchapter C., Part 1, H.B. 1048, 65th Texas Legislature, Regular Session, 1977.

[29]Id. at Section 3.02.

[30]Id. at Section 3.03.

[31]Id. at Section 3.04.

[32]Id. at Sections 3.05 and 3.06.

[33]Id. at Sections 3.07 and 3.09.

[34]Id. at Section 3.09.

Medicine in literature

EDITOR'S NOTE: This month's bibliography, prepared by TMA's Library staff, lists publications related to mammography. These and other publications pertaining to this topic are available from the Memorial Library.

MAMMOGRAPHY

Andersson I, Andren L, Nilsson M, et al: Reduction of absorbed dose in radiography of the breast. *Acta Radiol* (Diagn) (Stockh) 18(2):264-268, 1977.

Asaro JR: Minimal cancer of the breast: diagnosis by mammography. *W Va Med J* 73(2):25-28, 1977.

Bailar JC III: Mammography: a contrary view. *Ann Intern Med* 84(1):77-84, 1976.

Branda JF, Cigtay OS, Powell DE: Xeromammography and histology of common breast lesions. *Am Fam Physician* 15(2): 102-107, 1977.

Bross IDJ, Blumenson LE: Screening random asymptomatic women under 50 by annual mammographies: does it make sense? *J Surg Oncol* 8:437-445, 1976.

Buchanan JB, Jager RM: Single view negative mode xeromammography: an approach to reduce radiation exposure in breast cancer screening. *Radiology* 123(1):63-68, 1977.

Egan RL, Goldstein GT, McSweeney MM: Conventional mammography, physical examination, thermography and xeroradiology in the detection of breast cancer. *Cancer* 39(5):1984-1992, 1977.

Feig SA, Shaber GS, Patchefsky A, et al: Analysis of clinically occult and mammographically occult breast tumors. *Am J Roentgenol* 128(3):403-408, 1977.

Feig SA, Shaber GS, Schwartz GF, et al: Thermography, mammography, and clinical examination in breast cancer screening. Review of 16,000 studies. *Radiology* 122 (1):123-127, 1977.

Gisvold JJ, Karsell PR, Reese DF, et al: Clinical evaluation of computerized tomographic mammography. *Mayo Clin Proc* 52(3):181-185, 1977.

Hermel MB, Murdock MG: Microdose mammography. *Cancer* 38(5):1947-1951, 1976.

Kalisher L, Chaffer D: Indications and guidelines for mammographic examinations. *Am J Surg* 133(3):326-330, 1977.

Lester RG: Risk versus benefit in mammography. *Radiology* 124(1):1-6, 1977.

Libshitz HI, Fetouh S, Isley J, et al: One-view mammographic screening? *Radiology* 120(3):719-722, 1976.

Pressman PI: Mammography in surgical practice. *Am J Surg* 133(6):702-704, 1977.

Puretz DH: Mammography. History, current events, and recommendations. *NY State J Med* 76(12):1985-1991, 1976.

Robertson JLA: Changed appearance of mammograms following breast reduction. *Plast Reconstr Surg* 59(3):347-351, 1977.

Teixidor HS, Kazam E: Combined mammographic-sonographic evaluation of breast masses. *Am J Roentgenol* 128(3): 409-417, 1977.

Wolfe JN: Developments in mammography. *Am J Obstet Gynecol* 124(3):312-323, 1976.

IN THE TMA LIBRARY

American Medical Association: *Head Protection for the Cyclist, A Medical Inquiry.* Washington, DC, American Medical Association, 1977.

*Chapman JS: *The University of Texas Southwestern Medical School; Medical Education in Dallas, 1900-1975.* Dallas, Southern Methodist University Press, 1976.

Cline MJ: *The White Cell.* Cambridge, Mass, Harvard University Press, 1975.

Grabb WC, Smith JW (eds): *Plastic Surgery, A Concise Guide to Clinical Practice,* ed 2. Boston, Little, Brown & Co, 1973.

Hammersen F, Sobotta J: *Histology; A Colour Atlas of Cytology, Histology, and Microscopic Anatomy.* Philadelphia, Lea & Febiger, 1976.

*McPherson A (ed): *New and Controversial Aspects of Vitreoretinal Surgery.* St Louis, CV Mosby Co, 1977.

Manni C, Magalini SI, Scrascia E (eds): *Total Parenteral Alimentation; Proceedings of the International Symposium on Intensive Therapy, Rome, May 30-June 2, 1975.* New York, American Elsevier Publishing Co, Inc, 1976.

Mullan F: *White Coat, Clenched Fist; The Political Education of an American Physician.* New York, MacMillan Publishing Co, Inc, 1976.

*Nichols JD, Presley J: *"Please, Doctor,* Do *Something!" A Modern Physician Looks at Health and Nutrition.* Old Greenwich, Conn, Devin-Adair Co, 1972.

Rosenthal S: *Cosmetic Surgery: A Consumer's Guide.* Philadelphia, JB Lippincott Co, 1977.

*Selman J: *The Basic Physics of Radiation Therapy,* ed 2. Springfield, Ill, Charles C Thomas, 1976.

*Selman J: *The Fundamentals of X-ray and Radium Physics,* ed 6. Springfield, Ill, Charles C Thomas, 1977.

Selye H: *Stress in Health and Disease.* Boston, Butterworths, 1976.

**Member of Texas Medical Association.*

"I heard a discouraging word."

Information for authors

Texas Medicine is a scientific, clinical journal published primarily for members of the Texas Medical Association. In addition, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, coming meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1905 North Lamar Blvd., Austin 78705. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Scientific Articles
Manuscripts should be typed double-spaced with ample margins on firm paper. Two copies should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

References
Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrative Material
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously Published Material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with the manuscript.

Editorials
Editorials should be prepared in the same general manner, and should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the Managing Editor and consultants.

News
News items should be sent to the Editorial Offices, 1905 North Lamar Blvd., Austin 78705.

Continuing Education, Meetings
Continuing education courses and medical meetings are listed in each issue. Information about courses should include title, sponsor, location, dates, duration, fee, how many may enroll, for whom the course is designed, teaching methods, type and number of hours credit, and name and mailing address of a person to contact.

Information about meetings should include the name of the organization, place and inclusive dates, and name and mailing address of a person to contact. Program topics and names of speakers may be included as space permits.

Material should be submitted in writing six weeks before publication; for example, information for the June issue (published June 1) is needed by April 15.

Obituaries
Obituaries of deceased TMA members are published if adequate information is received within four months of date of death. When notifying the editors of a member's death, please give the name and address of next of kin.

Policy on Columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Scientific Publication Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the Committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the Managing Editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

Deaths

J.N. Bevil, MD

Jack Nugent Bevil, MD, a family practitioner, died Jan 17, 1977. Dr Bevil, 57, had been a Houston resident since 1949.
The physician was born in St Louis. He spent his youth in Hull, Tex, where his father practiced medicine. Dr Bevil was graduated from The University of Texas at Austin in 1940, and in 1944, he completed his MD degree at Tulane University School of Medicine, New Orleans. His internship was at Jefferson Davis Hospital, Houston (1944-1945). In 1948, he completed a general surgery residency at St Joseph's Hospital, also in Houston. He did postgraduate work at Baylor College of Medicine.
Dr Bevil was a member of the Harris County Medical Society, American Medical Association, Houston Academy of Medicine, Post-Graduate Medical Assembly of South Texas, and Southern Medical Association. He also was a member of Bayou Rifles, Inc; Houston Skeet Shooters Association; Texas and National Skeet Shooting Associations; and Texas and National Trapshooting Associations. He was a member of the Methodist church, Tulane Alumni Association, Phi Chi medical fraternity, and was a Mason.
Surviving the physician are his wife, Opal Kellum Bevil, and daughter, Patricia Jean Bevil, both of Houston; son, Jack Marshall Bevil, Gainesville, Tex; and sister, Mrs Dorothy Robertson, Houston.

J.F. Johnson, MD

Dr John Frank Johnson, a Rotan, Tex, family physician, died Dec 24, 1976, at the age of 76.
In addition to his medical degree, Dr Johnson held a pharmacy degree, and was the recipient of a Citation of Achievement for 50 years of devoted service to the Texas State Board of Pharmacy.
A native of Midway, Ala, Dr Johnson attended Oklahoma A&M College, Stillwater, during 1919-1921. In 1921, he entered Oklahoma University, Norman, and received his pharmacy degree in 1923. In 1940, he received his MD degree from Baylor College of Medicine, Dallas. He completed his internship at Gallinger Municipal Hospital, Washington, DC, in 1941, and opened his practice in Rotan the following year.
Dr Johnson was a member of the American Medical Association and Colorado Basin (Nolan-Fisher-Mitchell-Scurry-Kent-Stonewall-Borden) County Medical Society. He also was a Mason and a member of the First Baptist church.
Survivors include Dr Johnson's wife, Annie Laurie May Johnson, Rotan; brothers, W. Theodore Johnson, Hamlin, Tex, and Dr Robert H. Johnson, Fairhope, Ala; sisters, Carrie Johnson, San Antonio, and Janie Mae Johnson, Sioux Falls, SD; and two nephews.

Dr Johnson

Dr Knolle

R.E. Knolle, MD

Roger Edmond Knolle, MD, Brenham, died Dec 31, 1976, at the age of 85. He had practiced medicine for 57 years.
Dr Knolle began his medical career in Kenney, Tex. He later practiced with his father in Industry, Tex, where the younger Dr Knolle was born. He moved to Brenham in 1928.
Dr Knolle completed his pre-medical education at Texas A&M University, Bryan, in 1913. He received his MD degree from Tulane University School of Medicine, New Orleans, in 1918.
Dr Knolle was a member of the Washington-Burleson County Medical Society and the American Medical Association. He had been an honorary member of Texas Medical Association since 1972.
Surviving Dr Knolle are his wife, Dorothy Cox Knolle, Brenham; daughter, Carolyn Knolle Veatch, MD (Mrs Wendle Scott), Corpus Christi, Tex; brother, Ben Knolle, MD, Rosenberg, Tex; sisters, Mrs Arthur Miller, Carmine, Tex; Mrs LeRoy Fordtran, Bellville, Tex; and Mrs Henry A. Holle, Houston; three grandchildren and numerous nieces and nephews.

Dr Luecke

Dr Morris

H.B. Littlepage, MD

Henry Bryant Littlepage, a retired Fort Worth general practitioner, died Dec 27, 1976. He was 86.

Dr Littlepage was born in Gilmer, Tex. He received his preliminary education in Fort Worth. In 1914, he was graduated from the Fort Worth School of Medicine. Dr Littlepage remained in Fort Worth after his graduation and practiced there for 58 years. He retired in 1973.

The physician was an honorary member of Texas Medical Association, and a member of Tarrant County Medical Society and the American Medical Association. He also was a member of the Masons, Elks Club, and First Methodist church.

Surviving Dr Littlepage are his wife, Anna J. Littlepage, Fort Worth; daughter, Louise Littlepage Jamison, Houston; two grandchildren; and four great-grandchildren.

P.E. Luecke, Sr, MD

Percy Edgar Luecke, Sr, a Dallas pediatrician for 49 years, died Jan 13, 1977.

Dr Luecke, who retired in 1972, was past president, Children's Medical Center staff; clinical associate professor of pediatrics, Baylor College of Medicine; and clinical emeritus professor, UT Southwestern Medical School.

The native of Wichita Falls, Tex, attended The University of Texas at Austin. In 1917, he was graduated from UT Medical Branch, Galveston. He was an anatomy instructor at the Medical Branch for one year. Following service in the Army Medical Corps during World War I, Dr Luecke completed his internship at Philadelphia General Hospital and his residency at Children's Hospital of Philadelphia. He moved to Dallas in 1923.

Dr Luecke was an honorary member of Texas Medical Association and Dallas County Medical Society. He also was a member of the American Medical Association and past president of both the Texas Pediatric Society and the Dallas Pediatric Society. He was a life member of the Dallas Southern Clinical Society.

Surviving the physician are his wife, Martha Kretzschmar Luecke, Dallas; sons, Percy E. Luecke, Jr, MD, Dallas; Rev George Luecke, Dallas; Rev Richard Luecke, Chicago; Rev James Luecke, Arlington, Tex; and Rev David Luecke, Washington, DC; daughters, Margaret Waldschmidt, Oak Park, Ill; Elizabeth Brondos, Oak Creek, Wis; Dorothy Williams, Albuquerque, NM; Marilyn Rynearson, Dallas; Carolyn Halter, Irving, Tex; and Miriam Halter, Valparaiso, Ind; sisters, Editha Luecke, Denton, Tex; Agnes Dutsch, Covington, La; and Mrs Carl Kuehn, Wichita Falls; brothers, Lester Lueke and Edwin Lueke, Wichita Falls; and forty-three grandchildren.

R.E. Maresh, MD

Rudolph Edward Maresh, MD, 84, died Dec 14, 1976. Dr Maresh had been an honorary member of Texas Medical Association since 1965.

The family practitioner was a 55-year resident of Houston. He retired in 1966.

A native of Caldwell, Tex, Dr Maresh attended The University of Texas at Austin during 1913-1914. In 1915, he entered The University of Texas Medical Branch, Galveston, and received his MD degree in 1919. His internships were at Christ Hospital, Jersey City, NJ (1919) and St Joseph Hospital, Houston (1920).

Dr Maresh's professional memberships included Harris County Medical Society, the American Academy of Family Physicians, and American Medical Association. He also had been involved in tetany research.

Dr Maresh was a founder and past vice-president of the Liberty Loan and Building Association, and a member of the Episcopal church, and the AOA Fraternity and Shrine.

Surviving the physician are his son, John M. Maresh, Houston; sister, Mrs Rosalie Newman, Houston; brother, Frank Maresh, Rosenberg, Tex; and nephew, Dr John B. Halet, San Antonio.

E. H. Morris, MD

Ernest Henry Morris, MD, a prominent Canadian, Tex, physician, died Sept 5, 1976, at the age of 84. Dr Morris retired in 1975, ending a medical practice that spanned more than a half century.

The physician had served as president of the Top O'Texas (Gray-Hansford-Hemphill-

Lipscomb-Roberts-Ochiltree-Hutchinson-Carson) County Medical Society from 1932 through 1947. He also was involved in Canadian's civic affairs and was the 1972 recipient of the Canadian Chamber of Commerce Citizen of the Year award.

A native of Downers Grove, Ill, Dr Morris received his BS degree from Denison University, Granville, Ohio, in 1915. He completed his medical education at the University of Nebraska, Omaha, in 1919. He was an intern at Wise Memorial Hospital, Omaha, and a resident at Allegheny General Hospital, Pittsburgh.

In addition to the Top O'Texas County Medical Society, Dr Morris was a member of the American Medical Association and an honorary member of Texas Medical Association. He was past president of the Canadian Rotary Club, and past president and a charter member of the Canadian Chamber of Commerce. He also was a member of the Baptist church.

Surviving Dr Morris are his wife, Palma Lee Morris, Canadian; sister, Ethel Tracy, Denver; two nieces and one nephew.

H. O. Sappington, MD

Harry O. Sappington, MD, former senior physician at Exxon Oil and Refining Company in Baytown, died Dec 28, 1976. He was 65.

Dr Sappington moved to Baytown in 1938, following his graduation from The University of Texas Medical Branch in his native city, Galveston. He attended The University of Texas at Austin for two years before entering UTMB.

He held internships at St Mary's Hospital, Galveston (1936-1937) and Hermann Hospital, Houston (1937-1938). Dr Sappington was employed by Exxon from 1938 until 1971.

He was a member of Harris County Medical Society, the Industrial Medical Association, Texas Industrial Medical Association, and the American Medical Association. He also was a member of Phi Rho Sigma medical fraternity.

In his spare time, he worked with the Boy Scouts and enjoyed classical and semi-classical music and reading.

Surviving Dr Sappington are his wife, Rosalie Underwood Sappington, Baytown; daughter, Margo Andrisano, New York; sons, Harry O. Sappington, Jr, and Patrick Sappington, Baytown; sister, Mrs John F. Armstrong, New York; and three grandchildren.

Dr Sappington

O. T. Woods, MD

Ozro Theo Woods, MD, a retired Dallas physician, died Jan 1, 1977. He was 81.

Dr Woods, who retired in 1961, practiced for 33 years at the Dallas Medical and Surgical Clinic. He came to Dallas in 1924 to teach pathology at Baylor College of Medicine, and was the first medical director of the School of Occupational Therapy at Texas Womans University in Denton.

Dr Woods also was clinical emeritus professor of surgery at Southwestern Medical School in Dallas, a trustee and research fellow for the Southwestern Legal Foundation, and a member of the Governor's Committee on Aging.

He also had served with local, state, and national mental health committees and was a consultant for the Hogg Foundation of Austin, which recognized him for outstanding service in mental health.

Dr Woods was born in Danbury, Neb. He received his BA degree from the University of Nebraska, Lincoln, in 1920. In 1924, he completed his MD at the University of Nebraska College of Medicine, Omaha.

He was an honorary member of Texas Medical Association, a charter and lifetime member of the Dallas Southern Clinical Society, past president of the Dallas Society of General Surgeons, and past president and board member of the Dallas Child Guidance Center. He also was a member of Dallas County Medical Society and the American Medical Association.

Surviving Dr Woods are his wife, Hermine Hatfield Woods, Dallas; sons, Alan Woods, DVM, Denton, and Channing Woods, MD, Dallas; and daughter, Mariel Woods Summers, San Antonio.

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

J. N. BEVIL
Houston, 1919-1977

J. F. JOHNSON
Rotan, 1900-1976

R. E. KNOLLE
Brenham, 1891-1976

H. B. LITTLEPAGE
Fort Worth, 1890-1976

P. R. LUECKE, SR
Dallas, 1892-1977

R. E. MARESH
Houston, 1892-1976

E. H. MORRIS
Canadian, 1892-1976

H. O. SAPPINGTON
Baytown, 1911-1976

O. T. WOODS
Dallas, 1895-1977

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

TEXAS MEDICAL MEMORIAL LIBRARY FUND

1801 N. Lamar Blvd., Austin, Texas 78701

I enclose the amount of $_____. Given in Memory of _____

Please send remembrance card to:

Name _____

Address _____

City and State _____

Donor Information:

Name _____

Address _____

City and State _____

If you're sick of visiting auto showrooms and high-pressure salesmen, try our remedy.

You can see every kind of car made — American or foreign — in one place. Yours. Just let us know the cars you're interested in. We'll bring you full color brochures with all the information. Then we'll make all the leasing arrangements. It's easy — and your new car will be just what the doctor ordered.

There are more advantages too:
- Tax write-offs
- Low lease costs
- Positive cash flow
- No record-keeping necessary
- Custom-tailored leases
- Total maintenance of Lincoln-Mercury products.

Texas Medical Association Automobile Lease Program

Underwritten by:

Bankston Rentals, Inc. • 4747 LBJ Freeway • Dallas, Texas 75234 • 214/233-1441
Southwest Motor Leasing, Inc. • 6737 Southwest Freeway • Houston, Texas 77074 • 713/777-3816

MEDICAL ARTS CLINIC ASSOCIATION of corsicana

ANESTHESIOLOGY
LARRY R. STEVENER, M.D., F.A.C.A.

DERMATOLOGY & SYPHILOLOGY
JOSEPH M. GLICKSMAN, M.D., F.A.A.D.*
J. D. SMITH, M.D., F.A.A.D.*

FAMILY PRACTICE
ENNIS, TEXAS
W. B. KINZIE, MD., D.A.B.F.P.

GENERAL & VASCULAR SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S*
E. SCOTT MIDDLETON, M.D., F.A.C.S.*

GENERAL, VASCULAR & THORACIC SURGERY
ROSS B. REAGAN, M.D.*

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
ALLEN M. JONES, M.D.*
JOHN D. NELSON, M.D.*
L. BRYAN COTTON, JR., M.D.*
KENT ROGERS, M.D.*
JACK B. BANKHEAD, M.D.

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
W. GENE MURFF, M.D., F.A.C.O.G.*
NEAL GREEN, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D., F.A.A.O.O.*

ORTHOPAEDIC SURGERY
JAMES A. DOTSON, M.D.*

PATHOLOGY
MARY G. BANKHEAD, M.D.*

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D., F.A.A.P.*
MASON P. GILFOIL, M.D.

UROLOGY
WILLIAM V. HALL, M.D., D.A.B.U., F.A.C.S.*

EXECUTIVE DIRECTOR
DON L. BOWEN, M.G.M.A.

*DIPLOMATE OF THE AMERICAN BOARD

TRAVIS CLINIC FOUNDATION AND TRAVIS CLINIC ASSOCIATION

JACKSONVILLE, TEXAS 75766

STAFF

General Surgery:
L. L. Travis, M.D., Emeritus
Ken E. Kuykendall, M.D.
E. O. Bonsukan, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.
Spencer Kent, M.D.

Pathology:
Harbert Davenport, Jr., M.D.
Jimmy B. Harkins, M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
Mary A. Bone, M.D.
J. A. Armstrong, M.D.
D. B. Turner, M.D.
K. A. Majmundar, M.D.
B. Ruyani, M.D.
Wm. N. Meshel, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Dermatology:
T. S. Arrington, M.D.

Pediatrics:
M. L. Gray, M.D.
G. Majmundar, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

Podiatry:
Daniel H. Phelps, D.P.M.

Psychology:
Charles T. Fries, Ed.D.

Business Manager:
Gerald L. Burks

H. E. Eugene Bonham, M.D.

Diplomate American Board of Psychiatry & Neurology

Geraldine M. Bonham, B.A., B.S.N., R.N.

PERSONAL AND FAMILY COUNSELING
ADULT AND CHILD CONSULTATIONS
and
PSYCHOTHERAPY

1200 Summit Ave., Suite 526, Fort Worth, Texas 76102 817 335-3491

Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

Most Widely Prescribed—Antivert is the most widely prescribed agent for the management of vertigo* associated with diseases affecting the vestibular system such as Menière's disease, labyrinthitis, and vestibular neuronitis.

Relief of Nausea and Vomiting—Antivert/25 can relieve the nausea and vomiting often associated with vertigo.*

Dosage for Vertigo* —The usual adult dosage for Antivert/25 is one tablet t.i.d.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25 (meclizine HCl) 25 mg. Tablets for vertigo*

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* **Warning**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

FOR LONG-TERM CONTROL OF HYPERTENSION.* SERUM K^+ AND BUN SHOULD BE CHECKED PERIODICALLY. (SEE WARNINGS SECTION.)

SK&F CO., Carolina, P.R. 00630

SK&F CO.
a SmithKline company

Texas Physicians' Directory

DIRECTORY RATES & DATA: Space is available to TMA members at $12.50 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. Section headings are limited to those specialties designated by the American Medical Association. A list of these specialties is available upon request. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Clinics

THE FORT WORTH CLINIC
1221 West Lancaster Avenue, Fort Worth, Texas 76102
Telephone 817 336-7191

INTERNAL MEDICINE
Kendra J. Belfi, M.D.
John M. Church, M.D.
Thomas J. Coleman, M.D.
Robert R. Dickey, M.D.
Ferd E. Garrison, Jr., M.D.
Cortell K. Holsapple, M.D.
John E. Johnson, Jr., M.D.
O. M. (Jack) Phillips, M.D.

GENERAL SURGERY
John H. Sewell, M.D.
Robert L. Sewell, M.D.

ORTHOPEDIC SURGERY
Thomas E. Rapp, M.D.

CONSULTANTS IN RADIOLOGY
Victor E. McCall, M.D.
Dixon Presnall, M.D.
Harry H. Whipp, M.D.

FIFTH AVENUE CLINIC
650 Fifth Avenue, Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etler, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

MEDICAL ASSOCIATES OF CORPUS CHRISTI, P.A.
1533 South Brownlee, Corpus Christi, Texas 78404
Telephone 883-7411

FAMILY MEDICINE
Travis B. Phelps, M.D., F.A.A.F.P.
T. D. Harvey, M.D., A.B.F.P.
H. R. Rose, M.D., A.B.F.P.
C. L. Vernor, M.D.
Frederick S. Maurer, M.D.

ORTHOPEDIC SURGERY
C. M. Yanez, M.D., F.A.C.S.

INTERNAL MEDICINE
G. A. Reeves, M.D.
Pruett Moore, Jr., M.D.
Mark G. Strauss, M.D.

EXECUTIVE DIRECTOR
Gene Hybner

DIRECTOR OF NURSES
Pat Parker, R.N.

Remind your colleagues of your specialty and office location. Purchase a listing in the "Texas Physicians' Directory."

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

INTERNAL MEDICINE
C. M. Maruri, M.D.
A. J. Nodarse, M.D.

GENERAL SURGERY
B. W. Hink, M.D., F.A.C.S.

FAMILY MEDICINE
J. H. Cochrane, Jr., M.D., F.A.A.F.P.
J. W. O'Bryant, M.D.
A. A. Piske, M.D.

FAMILY MEDICINE AND GENERAL SURGERY
Salvador Faus, M.D.

CLINIC MANAGER
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

MALONE AND HOGAN CLINIC
1501 West 11th Place, Big Spring, Texas 79720, Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.
W. B. Allensworth, M.D.

GENERAL SURGERY
C. B. Marcum, M.D., F.A.C.S.
J. E. Mathews, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
C. T. Moore, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
D. M. Logan, M.D.
V. T. Smith, M.D.

FAMILY PRACTICE
W. R. Strahan, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.
J. W. Kuykendall, M.D.

PEDIATRICS
J. M. Woodall, M.D.
B. R. Owen, M.D., F.A.A.P.

RADIOLOGY & NUCLEAR MEDICINE
Buerk Williams, M.D.
A. P. Goswami, M.D.

UROLOGY
J. W. Cowan, M.D.

PODIATRY
Bradford Glass, D.P.M.

PATHOLOGY
B. A. Campomanes, M.D.

CONSULTANT IN ELECTROENCEPHALOGRAPHY
M. L. Proler, M.D.

ADMINISTRATION
R. L. Helth, Administrator

RUGELEY AND BLASINGAME CLINIC
2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Richard R. Raphael

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.
W. C. Yankowsky, M.D.

UROLOGY
H. Z. Fretz, M.D.

DERMATOLOGY
T. S. Arrington, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

ANESTHESIOLOGY
C. G. Spears, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77030
Telephone 713 797-9191

Internal Medicine and Diagnosis

ALLERGY
Arthur T. Pedersen, M.D.

CARDIOVASCULAR DISEASE
Thomas J. Fatherree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.
Boguslaw Godlewski, M.D.

DERMATOLOGY
Samuel F. Bean, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Raymond L. Gregory, M.D.
R. Frederick Gregory, M.D.
Thomas J. Hanson, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.
Michael Gagliardi, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George T. Conklin, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
George Burnazian, M.D.
Benjamin L. Portnoy, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.
James V. Ryan, M.D.

NEPHROLOGY
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

NEUROLOGY
Donald J. Russell, M.D.
George Isaacs, M.D.
Ernesto Infante, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.
Harry R. Price, M.D.
Edward L. Middleman, M.D.
Martin J. Hrgovic, M.D.

PATHOLOGY
Paul B. Radelat, M.D.
Ashok M. Balsaver, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.
Martin L. Kaplan, M.D.
Louis C. Waddell, Jr., M.D.

RADIOLOGY
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.
Joe B. Wilson, M.D.
Howard J. Pollock, M.D.

NUCLEAR MEDICINE
Donald A. Podoloff, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
Robert B. Hall,
Administrator

HOUSTON HEADACHE CLINIC
Park Plaza Professional Building
1213 Hermann Drive, Suite 855
Houston, Texas 77004
(713) 528-1916

Neurology
Ninan T. Mathew, M.D., F.R.C.P.(C)

Allergy

HOUSTON ALLERGY CLINIC
Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Richard H. Jackson, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Warren J. Raymer, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
D. W. Waddell, M.D., F.A.A.C.I.A.
Ramon Garrido, M.D., F.A.C.A., F.A.A.C.I.A.*
(Certified American Board of Pediatrics)
*Diplomate American Board of Allergy & Immunology

Suite 444, Hermann Professional Building
6410 Fannin St., Houston, Texas 77030, 713 797-0900

PETER B. KAMIN, M.D., P.A.
Certified American Boards of Pediatrics and Allergy
Diplomate American Board of Allergy and Immunology
Allergy and Immunology

Suite 601, Oak Hills Medical Building
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Phone 512 696-4405 or 227-6331

TMA Group Insurance Plans
. . . Another service of your association

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

JOHN P. McGOVERN, M.D.
Director-Consultant

THEODORE J. HAYWOOD, M.D.
ORVILLE C. THOMAS, M.D.
JOSEPH T. QUENG, M.D.
LAWRENCE G. THORNE, M.D.
K. VENUGOPALAN, M.D.
ROBERT E. SMITH, M.D.
JAMES A. AYERS, M.D.
EUNICE W. CHOU, M.D.
ALBERT LEHMANN, M.D.
GERALD T. MACHINSKI, M.D.

Research Associates
MICHAEL H. SMOLENSKY, Ph.D.
ALAIN REINBERG, M.D., Ph.D.
CALVIN J. McLERRAN, Ph.D.
MICHAEL A. McCORMICK, Ph.D.
GLENNA M. KYLE, M.S.
ITING MAY LU, M.S.

Consultants

EVAN M. HERSH, M.D.
JUDITH H. MARSTON, Ph.D.
Immunology

JAMES A. KNIGHT, M.D.
Psychiatry

HERBERT C. McKEE, Ph.D.
RICHARD K. SEVERS, Ph.D.
Air Pollution

CAROLYN S. LEACH, Ph.D.
Clinical Laboratories

JOHN A. THOMAS, Ph.D.
Clinical Pharmacology

THOMAS D. DOWNS, Ph.D.
Biometrics

WARREN E. SCHALLER, H.S.D.
Allied Health Sciences

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025, 713 661-1444

CORPUS CHRISTI ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology

2530 Morgan, Corpus Christi, Texas, 882-3487

STUART ALAN MASON, M.D., P.A.
Fellow American Association for Clinical Immunology and Allergy
Fellow of the American College of Allergists
Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

ALLERGY AND IMMUNOLOGY
Joseph T. Sams, M.D., P.A. or C. David Meadows, M.D., P.A.
Diplomates of the American Board of Allergy and Immunology

900 W. Randol Mill Rd., Suite 215, Arlington, Texas 76012, 817 277-1161

CHARLES A. RUSH, JR., M.D.
Diplomate/American Board of Allergy & Immunology
Fellow, A.A.A., A.C.A., A.A.C.I.A.

Northeast Medical Clinic Association
7601 Glenview Drive
Fort Worth, Texas 76118

FREDERICK W. GROVER, M.D. & ASSOCIATES
Diplomate of the American Board of Allergy and Immunology
Allergy and Immunology
Children and Adults
6114 Sherry Lane, Preston Center, Dallas, Texas 75225
Telephone: (214) 363-7790

MEMORIAL LIBRARY
TEXAS MEDICAL ASSOCIATION
1801 North Lamar Blvd., Austin, Texas 78701, 512 477-6704

A clinical library designed to assist the practicing physician
50,000 bound volumes • extensive reprint and periodical collection
• 400 lay and professional films • pathological slide sets
• cassette and reel-to-reel tapes from AMA, Audio Digest
• MEDLINE computer data service

. . . Another service of your association

Colon & Rectal Surgery

ALVIN BALDWIN, JR., M.D.
Diplomate American Board of Colon and Rectal Surgery

R. D. DIGNAN, M.D.
Diplomate American Board of Surgery
Diplomate American Board of Colon and Rectal Surgery

Suite 1209 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246
Telephone 824-2573

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery

2715 Fannin Street, Houston, Texas

C.D.L. CROMAR, M.D., M.S., F.R.C.S.E., F.R.C.S.C.
Surgery of the Rectum and Colon

Suite 8, 3337 Plainview, Pasadena, Texas 77504

FT. WORTH PROCTOLOGIC CLINIC, P.A.
Colon and Rectal Surgery and Colonoscopy

Sommai Sehapayak, M.D.
Diplomate American Board of Colon and Rectal Surgery

Medical Tower, Suite 210, 1550 West Rosedale,
Fort Worth, Texas 76104, 817-338-4501 (24 hours)

SUVID PITA, M.D.
Colon and Rectal Surgery
Colonoscopy

Barnett Tower, Baylor Medical Plaza
3600 Gaston Ave, Suite 411
Dallas, Texas 75246
Telephone 214 821-4300

MANUEL G. LAGON, M.D., F.A.C.S.
Diplomate American Board of Colon and Rectal Surgery

FORT WORTH COLON AND RECTAL CLINIC, P.A.
Colonoscopy, Colon and Rectal Surgery

909 Eighth Avenue, Fort Worth, Texas 76104; Telephone 332-1371

Dermatology

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy

1400 Eighth Street, Wichita Falls, Texas

DRS. PIPKIN AND RESSMANN
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies

714 Medical Arts Bldg., San Antonio, Texas 78205

JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
A Professional Association
Dermatology, Syphilology, and Cancer of the Skin

3801 19th St., Suite 500, Lubbock, Texas 79410

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies

7777 Forest Lane, Suite 214, Dallas, Texas 75230; Phone 661-7460

GERALD A. CASID, M.D., P.A.
Skin Diseases—Skin Tumors
Hair Transplantation, Dermabrasion, Chemical Peels

333 N. Shiloh Rd., Garland, Texas 75042
Phone 214 272-5451

DAVID S. ALKEK, M.D. AND ASSOCIATES
LON E. ROGERS, M.D.
Dermatology and Cancer of the Skin
Dermabrasion and Chemical Peel

8226 Douglas Avenue, Suite 755
Dallas, Texas 75225
Ph: 214 691-6691

Medical City
7777 Forest Lane
Dallas, Texas 75230

WILLIS I. COTTEL, M.D.
Practice Limited to Skin Cancer
Moh's Chemosurgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960

Endocrinology

ENDOCRINE ASSOCIATES OF DALLAS, P.A.
STANLEY FELD, M.D.
RICHARD SACHSON, M.D.
Practice Limited to Endocrinology

Douglas Plaza Bldg., Telephone: 363-5535
8226 Douglas Avenue, Dallas, Texas 75225

ZAVEN H. CHAKMAKJIAN, M.D.
SAMUEL P. MARYNICK, M.D.
Practice Limited to Endocrinology & Metabolism

3500 Gaston Avenue, Dallas, Texas 75246
Telephone 214 820-2216

Family & General Practice

GLENN C. COATES, M.D.*
GENE V. HAVERLAH, M.D.
SAM A. NIXON, M.D.*
EUGENE M. TOKAR, D.D.S.

1303 Hospital Blvd., Floresville, Texas 78114, 512 393-2527
*Diplomate American Board of Family Practice

SAMUEL SILVA, M.D.
Hair Transplantation

4759 South Freeway, Fort Worth, Texas, 817 923-7374

TMA Members' Retirement Trust (Keogh)

. . . Another service of your association

Gastroenterology

CECIL O. PATTERSON, M.D., F.A.C.P.
Gastroenterology, Gastroscopy, Esophagoscopy
1414 Medical Arts Building, Dallas, Texas, 742-6141-44

MILFORD O. ROUSE, M.D., F.A.C.P.
Consultations in hospitals only

DRS. BAILEY, DOUGLAS AND DEVANEY ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
George T. DeVaney, M.D.
Nisar Ahmed, M.D.

KALMAN NARAYAN, M.D.
Diplomate American Board of Internal Medicine
Gastroenterology, Gastroscopy, Colonoscopy, Polypectomy, E.R.C.P.

909 8th Ave., Suite 7, Ft. Worth, Texas 76104, 817 336-9055

General Surgery

BURT B. SMITH, M.D., F.A.C.S.
Surgery
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery

728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery

1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Thoracic Surgery
Vascular, General and Thoracic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue,
Dallas, Texas 75246, 821-2356

ROBERT J. TURNER, III, M.D., F.A.C.S.
Diplomate American Board of Surgery
General and Peripheral Vascular Surgery

The Saint Joseph Professional Building
1400 South Main Street, Suite 104
Fort Worth, Texas 76104, 335-8311

ROBERT M. STECKLER, M.D.
Diplomate American Board of Surgery
Head and Neck Surgery, Surgery, and Surgical Oncology

Baylor Medical Plaza, Suite 1008, 3600 Gaston Avenue,
Dallas, Texas 75246, 214 827-9880

ROBERT DAVIS, M.D., M.B., B.Ch. (Rand), F.R.C.S. (Edin.)
General Surgery
430 Park Plaza Professional Building, 1213 Hermann Drive,
Houston, Texas 77004; 713 528-0597
By Appointment

Gynecology

RAYMOND H. ABRAMS, M.D., F.A.C.O.G.
Diplomate American Board of Obstetrics and Gynecology
Gynecological and Reconstructive Surgery

3434 Swiss Avenue, Suite 401, Dallas, Texas 75204
Telephone 214 823-1063

Hand Surgery

L. Lee Lankford, M.D. and Peter R. Carter, M.D.
HAND SURGERY ASSOCIATION
Hand Surgery and Upper Extremity Reconstructive Surgery

Baylor Medical Plaza, Barnett Tower, Suite 802, 3600 Gaston Avenue
Dallas, Texas 75246, 214 823-5351

Neurological Surgery

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery
Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Morris Sanders, M.D.
Phillip E. Williams, Jr., M.D.
Ira C. Denton, Jr., M.D.
W. Robert Hudgins, M.D.
Jack Woolf, M.D., Consultant

5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620,
Dallas, Texas 75235; 214 637-0420

8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905,
Dallas, Texas 75231; 214 369-7596

3600 Gaston Avenue, Barnett Tower, Baylor Medical Plaza, Suite 310,
Dallas, Texas 75246; 214 826-1976

JACK STERN, M.D., F.A.C.S.
GARY C. HUTCHISON, M.D., F.A.C.S.
THOMAS R. BOULTER, M.D., F.A.C.S.
Neurological Surgery

8210 Walnut Hill Lane, Suite 805, Dallas, Texas 75231, 363-8524

RONALD SMITH, M.D.
Neurological Surgery

901 South Lake, Fort Worth, Texas, 336-0551

EL PASO NEUROLOGICAL INSTITUTE
Professional Association
Neurology, Neurosurgery, Electroencephalography
Neuro-Radiology, Physiotherapy

William J. Nelson, M.D., Neurosurgery
John T. O'Neal, M.D., Neurosurgery
Robert D. Schneider, M.D., Neurology and Electroencephalography
Steven K. Crouse, M.D., Neurology and Electroencephalography

Medical Plaza Bldg., Suite 307
El Paso Medical Center
1501 Arizona Avenue, El Paso, Texas 79902
Telephone 915 532-8901

TMA International Travel Program
. . . Another service of your association

CHERRY-LONG NEUROSURGERY ASSOCIATION
GLENN R. CHERRY, M.D., D.A.B.N.S., F.A.C.S.
R. GORDON LONG, M.D., D.A.B.N.S., F.A.C.S.
BENNIE B. SCOTT, M.D.
Neurological Surgery
Baylor Medical Plaza — 605 Barnett Tower
3600 Gaston Avenue — Dallas, Texas 75246
Telephone 214 826-7060

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D., F.A.C.S.
E. FLOYD ROBINSON, M.D.
Neurological Surgery
2210 Maroneal, Houston, Texas 77025, 523-3684

TEXAS NEUROLOGICAL INSTITUTE AT DALLAS, P.A.
Neurological Surgery
James E. Bland, M.D.
Martin L. Lazar, M.D.

Medical Neurology, Electroencephalography and Electromyography
Ralph G. Greenlee, Jr., M.D.
Allan L. Naarden, M.D.
Richard R. North, M.D.
William S. Woodfin, M.D.

Neuro-Ophthalmology
Peter R. Bringewald, M.D.

Director, Pain Relief Center and Neuroanesthesiologist
P. Prithvi Raj, M.D.

Consultant in Speech
Josephine Simonson, M.A.

7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

SOUTHWEST NEUROSURGICAL ASSOCIATES
Richard H. Moiel, M.D.
Frank S. Yelin, M.D.
Arthur Evans, M.D.

601 Medical Towers, Houston, Texas 77030; 713 790-0795
7777 Southwest Freeway, #942, Houston, Texas 77074

Nuclear Medicine

NUCLEAR MEDICINE LABORATORIES OF TEXAS
Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., M.D., F.A.C.N.M.
Director - 713 790-0540
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, JR., M.D., F.A.C.N.M.
Practice Limited to Nuclear Medicine
100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540

Diplomate American Board of Nuclear Medicine

Occupational Medicine

Eric G. Comstock, M.D.
Diplomate American Board of Medical Toxicology

OCCUPATIONAL TOXICOLOGY
1802 Medical Towers, Houston, Texas 77030; 713 790-0160

Ophthalmology

HOUSTON EYE ASSOCIATES
1100 Hermann Prof. Bldg., Houston, Texas 77030, 713 790-1100

Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D., F.A.C.S.
Malcolm L. Mazow, M.D., F.A.C.S.
Robert H. Stewart, M.D., F.A.C.S.
Robert B. Wilkins, M.D., F.A.C.S.
Jeffrey D. Lanier, M.D., F.A.C.S.
Michael A. Bloome, M.D., F.A.C.S.
Paul C. Salmonsen, M.D.
Richard L. Kimbrough, M.D.

DRS. ALPAR, TAYLOR, HOWELL, CURRIE & WEINBERGER
Ophthalmology
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Hugh B. Currie, M.D.
Bruce L. Weinberger, M.D.
Diplomates of the American Board of Ophthalmology
15 Medical Drive, Amarillo, Texas

TEXAS RETINA ASSOCIATES
Albert Vaiser, M.D.
William B. Snyder, M.D.
William L. Hutton, M.D.
Dwain G. Fuller, M.D.
Diseases and Surgery of the Retina and Vitreous
318 Medical Arts Building, Dallas, Texas, 748-0958

BRUCE C. TAYLOR, M.D.
RICHARD L. WINSLOW, M.D.
Diseases & Surgery of the Vitreous and Retina
2811 Lemmon Ave. E., Dallas, Texas 75204
214 521-1153

McPHERSON ASSOCIATES
Diseases and Surgery of the Retina and Vitreous
Alice R. McPherson, M.D.
Robert A. Moura, M.D.
Arthur W. Willis, M.D.
Robert W. Butner, M.D.

6436 Fannin, Suite 800, Houston, Texas 77030
713 797-1903

EYE ASSOCIATES
Diseases and Surgery of the Eye
Charles A. Sargent, M.D.
Alan C. Baum, M.D.

3838 Hillcroft, #415, Houston, Texas 77027, 713 781-2882

CORPUS CHRISTI EYE ASSOCIATES
J. Gordon Bryson, M.D.
C. A. Struve, M.D.
John W. Lewis, M.D.

3166 Reid Drive, Corpus Christi, Texas 78404, Phone 853-7319

EYE CENTER OF AUSTIN
3913 Medical Parkway
Austin, Texas 78756; 512 451-8484

Edward J. Petrus, M.D.
Richard E. Nieman, M.D.

JOHN Y. HARPER, JR., M.D., P.A.
Diseases & Surgery of the Vitreous and Retina
601 Madison Square Medical Building
311 Camden Street, San Antonio, Texas 78212
512 226-1812

TMA Physicians' Placement Service
. . . Another service of your association

PETER R. BRINGEWALD, M.D.

Neuro-Ophthalmology

Texas Neurological Institute at Dallas, P.A.
7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

By appointment only.

COASTAL BEND EYE ASSOCIATES

Jack A. Sahadi, M.D.

712 Booty Street, Corpus Christi, Texas 78404
Telephone 512 888-4288

Orthopedic Surgery

H. H. Beckering, M.D.
L. Ray Lawson, M.D.
George Truett James, M.D.
Robert D. Vandermeer, M.D.
Wynne M. Snoots, M.D.
R. Stephen Curtis, M.D.

W. B. CARRELL MEMORIAL CLINIC

A Professional Association
2828 Lemmon Ave., Dallas, Texas

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas

Louis J. Levy, M.D.
Henry C. McDonald, Jr., M.D.
Fred W. Sanders, M.D.
James M. Beckley, M.D.
Joseph H. Gaines, M.D.

Ralph E. Donnell, M.D.
F. Carlton Hodges, M.D.
J. Price Brock, Jr., M.D.

ORTHOPEDIC ASSOCIATES

Diplomates American Board of Orthopedic Surgery

1133 N. 19th St., Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC

Joseph Barnhart, M.D.
Donald T. Lazarz, M.D.
Lee C. Detenbeck, M.D.
Thomas S. Padgett, M.D.

5620 Greenbriar, Houston, Texas 77005, 526-6262 and
Parkway Towers Professional Building, 150 West Parker Road,
Houston, Texas 77022, 691-3905

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr., M.D.
Kenneth C. Scholz, D.D.S., M.D.
G. S. Gill, M.D.

3702 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

THE ORTHOPEDIC GROUP OF RICHARDSON

Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.

Orthopedic Surgery

812 S. Central Expressway, Richardson, Texas 75080, 231-6396

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr., M.D.
E. E. Rising, Jr., M.D.*
C. Poindexter, M.D.
C. R. Vavrin, M.D.
Frank R. Vincenti, M.D.
Diplomates American Board of Orthopaedic Surgery
*Emphasizing Surgery of the Hand

801 West Randol Mill Road, Arlington, Texas 76012, 817 261-8284

ADDRESS CHANGE? Avoid missing or delayed mail. Send old and new address to Membership Department, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701.

LOUIS W. BRECK, M.D., P.A., F.A.C.S.

Diplomate American Board of Orthopaedic Surgery

Practice Limited to Orthopaedic Surgery

1209 North Kansas, El Paso 79902
Telephone 915 544-3831

THURSTON DEAN, M.D.

Diplomate American Board of Orthopedic Surgery

509 N. Garfield Street
Midland, Texas 79701
Telephone: 915 682-0433 or 682-0163

ORTHOPEDIC ASSOCIATES OF DALLAS

F. Leon Ware, M.D.
Dan R. Sutherland, M.D.
John B. Gunn, M.D.
Richard A. Shirley, M.D.
R. Dan Loyd, M.D.

Orthopedic Surgery

3600 Gaston Avenue, Suite 303
Dallas, Texas 75246; 214 823-7090

Otolaryngology

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.

Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

EL PASO EAR, NOSE AND THROAT ASSOCIATES

Otolaryngology, Audiology and Electronystagmography

Mark J. Wegleitner, M.D.
Lyle D. Weeks, M.D.
Nancy Parker, M.S.-Audiologist

First American Title Bldg., Suite 160, 5959 Gateway West
El Paso, Texas 79925

Otology

DANIEL McNAMARA MARTINEZ, M.D., F.A.C.S.

Otology and Otoneurology

8210 Walnut Hill Lane, Presbyterian Professional Building,
Suite 400, Dallas, Texas 75231; 214 691-7331

DALLAS HEARING, BALANCE AND OCULAR PULSE LABORATORY

Audiology—Vestibulometry—Non-invasive Carotid and Vertebral Circulation Studies

402 Presbyterian Professional Building, 8210 Walnut Hill Lane,
Dallas, Texas 75231; 214 691-7367

Pathology

FORT WORTH MEDICAL LABORATORIES

John J. Andujar, M.D.
Dorothy Patras, M.D.

1400 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

TMA Automobile Lease Program
. . . Another service of your association

PRUITT MEDICAL LABORATORIES

Jack Pruitt, M.D.
E. Hernandez, M.D.
Diplomates, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation
P. O. Box 160, Lufkin, Texas 75901, 634-4451

BROWN & ASSOCIATES MEDICAL LABORATORIES

Clinical Pathology, Hematology, Surgical Pathology, Exfoliative Cytology and Electrophoresis

Wilson G. Brown, M.D.
George V. Miller, M.D.
Walter G. Olin, Jr., M.D.
John R. Thomas, M.D.
S. Joseph Skinner, M.D.
Joe B. Haden, M.D.
Enrique van Santen, M.D.
Elaine V. Shalek, M.D.
Robert H. McNeely, M.D.
Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas 77030
220 Park Plaza Prof. Bldg., Houston, Texas 77004
Telephone 527-5230
Mailing Containers on Request—Office Pickup Service in Houston

WACO CLINICAL PATHOLOGY LABORATORY

K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Robert Wayne Walter, M.D., F.A.C.P.
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation
Mailing Containers on Request
2112 Washington Ave., P.O. Box 3160, Waco, Texas 76707, 756-7226

J. S. Wilkenfeld, M.D., Medical Laboratories, Inc.

J. S. WILKENFELD, M.D. ENA E. MOCEGA, M.D.
Diplomates of the American Board of Pathology

Anatomical Pathology, Clinical Pathology Exfoliative Cytology and Dermatopathology

8850 Long Point Road, P.O. Box 55008
Houston, Texas 77055, 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

ARTHUR L. RAINES, M.D. AND ASSOCIATES

Pathologists

DIPLOMATES, AMERICAN BOARD OF PATHOLOGY
Clinical Pathology — Surgical Pathology
Exfoliative Cytology — Medicolegal Consultation
Hospital and Clinic Laboratory Consultation
P. O. Box 118, Cleburne, Texas 76031
817 645-9181, Ext. 360
MAILING CONTAINERS ON REQUEST

HENRY B. OWENS, M.D., F.C.A.P.

Diplomate American Board of Pathology

Cytology and Tissue Pathology Only

801 E. Border St., Suite M, P. O. Box 1627
Arlington, Texas 76010, 817 461-2771

Mailing Containers on Request—Office Pickup Service in Arlington

PATHOLOGY ASSOCIATES OF TEXAS

Medical Laboratory

1050 W. Magnolia, Fort Worth, Texas 76104
P. O. Box 2176 Zip Code 76101, 817 335-5297
Diplomates, American Board of Pathology

May Owen, M.D.
John W. Alexander, M.D.
John E. Bremner, M.D.
Vincent C. Cirone, M.D.
Donald M. Cohen, M.D.
Robert W. Collison, M.D.
C. D. Fitzwilliam, M.D.
Feliks Gwozdz, M.D.
Alcina F. Jatoi, M.D.
Raoul Kunert, M.D.
Charles B. Mitchell, M.D.
B. V. Ramakrishna, M.D.
Richard C. Schaffer, M.D.

Consulting Toxicologist: Jack E. Wallace, Ph.D.

Branch Laboratory Facilities

Doctor's Building, Suite 109
800 Fifth Avenue
Fort Worth, Texas
335-5297 (Ext. 31 and 60)

Medical Tower Building, Suite 219
1550 West Rosedale
Fort Worth, Texas
335-5297 (Ext. 32 and 62)

Medical Plaza Building, Suite 110
800 Eighth Avenue
Fort Worth, Texas
335-5297 (Ext. 57 and 59)

H.E.B. Medical and Dental Center, Suite 401
2700 Tibbets Drive
Bedford, Texas
283-2861

Physical Medicine & Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES WARM SPRINGS FOUNDATION, INC.

P. O. BOX 58, GONZALES, TEXAS 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade
DAVID E. GUMPER, Administrator
LARRY E. BROWNE, M.D., Medical Director

ROBERTO G. ROLFINI, M.D.

Diplomate American Board of Physical Medicine & Rehabilitation

Rehabilitation Medicine and Electromyography

702 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205, Telephone 226-2424

SHOAL CREEK REHABILITATION CENTER

3501 Mills Avenue, Austin, Texas 78703, 512 452-0361

Rodney J. Simonsen, M.D., Medical Director
Joe T. Powell, M.D., Associate Director

Comprehensive rehabilitation facilities for spinal cord injury, stroke, head injury, pain management, and related conditions

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D., F.A.C.S.
THOMAS M. BIGGS, M.D., F.A.C.S.
LAURENCE E. WOLF, M.D.
Diplomates American Board of Plastic Surgery

PLASTIC SURGERY

5419 Caroline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.

Plastic, Maxillo-Facial and Hand Surgery

530 Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

JOHN B. PATTERSON, M.D., F.A.C.S.

Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Cosmetic Surgery

612 Doctors Bldg., Fort Worth, Texas 336-0356

PLASTIC SURGERY ASSOCIATES

Simon Fredricks, M.D., F.A.C.S.
Jonathan J. Dora, M.D.

Aesthetic, Plastic, Reconstructive and Hand Surgery

1103 Medical Tower, Houston, Texas 77030, 795-5575

DAVID A. GRANT, M.D., F.A.C.S.

Diplomate American Boards of Surgery and Plastic Surgery

Plastic & Reconstructive Surgery
Cosmetic Surgery

606 Medical Plaza Bldg., 800 Eighth Avenue, Fort Worth, Texas 76104, 335-4751

VALENTIN GRACIA, M.D., P.A., F.A.C.S., F.I.C.S., D.A.B.

Aesthetic Surgery—Burns

1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

PATRICK H. BECKHAM, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1111 West 34th Street, Suite 207, Austin, Texas 78705, 459-3258

WILLIAM E. BARNES, M.D.
Diplomate American Board of Plastic Surgery
Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 608, Austin, Texas, 454-7659

JOHN E. CARTER, M.D., P.A.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery

7711 Louis Pasteur Drive, San Antonio, Texas 78229
Telephone: (Area Code 512) Office 696-2390 Medical Exchange 227-6331

JOSEPH C. FORD, M.D., P.A., F.A.C.S.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery

508 Madison Square Medical Building
311 Camden, San Antonio, Texas 78215, 224-5509

BROMLEY S. FREEMAN, M.D., F.A.C.S.
D. ROBERT WIEMER, M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery
Plastic & Reconstructive Surgery

7000 Fannin, Suite 1770, Houston, Texas 77025
713 795-5584

JACK L. CONLEE, M.D.
Diplomate American Board of Plastic Surgery
Plastic and Cosmetic Surgery

3318 S. Alameda, Suite 1, Corpus Christi, Texas, 855-7359

PLASTIC SURGERY ASSOCIATION
LEONARD KOCH, M.D.
Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410, 806 792-2313

ROBERT L. CLEMENT, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive Surgery

1111 West 34th Street, Suite 205, Austin, Texas 78705, 512 459-3101

STEPHEN C. LESAUVAGE, M.D.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1318 Clinic Drive, Tyler, Texas 75701; 214 593-8296

JOSEPH P. FLEMING, M.D., F.R.C.S.(C), F.A.C.S.
Plastic and Reconstructive Surgery

1213 Hermann Drive, Suite 645, Park Plaza Professional Building
Houston, Texas 77004; 713 524-7545

JUDSON L. CROW, M.D.
Diplomate, American Board of Surgery
Diplomate, American Board of Plastic Surgery
Plastic and Reconstructive Surgery

730 N. Main—Suite 716, San Antonio, Texas 78205, 512 224-2075

Psychiatry

Perry C. Talkington, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Larry R. Kimsey, M.D.
Charles M. Smith, M.D.
Gregory G. Dimijian, M.D.
Linda R. Hughes, M.D.
Roy H. Fanoni, M.D.
Byron Howard, M.D.
Larrie W. Arnold, M.D.
Madeline W. Harford, M.D.
John G. Looney, M.D.

Practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

PERRY C. TALKINGTON, M.D.
Psychiatry

4645 Samuell Blvd., Dallas, Texas 75228, 214 381-3849

FABRE CLINIC

LOUIS F. FABRE, JR., M.D., Ph.D.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy
Children — Family — Alcoholism

Free of charge to patient MEDICATION CLINIC
FOR PATIENTS WITH ANXIETY OR DEPRESSION
IN CONJUNCTION WITH CNS RESEARCH WITH
PSYCHOPHARMACOLOGICAL COMPOUNDS

DAVID McLENDON, Ph.D.
Licensed Clinical Psychologist
Individual and Group Psychotherapy
Diagnostic Evaluations and Counseling

H. JOHN JACKSON, Ed.D.
Educational Psychologist
Administrative Consultation to School District
Program Organization Consultation
Individual Family Counseling

5503 Crawford Street, Houston, Texas 77004, 713 526-2328

ATTEND THESE TMA MEETINGS IN 1978

- Conference on Legislation, Jan. 21, Austin
- Annual Session, May 10-14, San Antonio
- Conference on Medical Service, Sept. 23, Austin

HARRIS HAUSER, M.D. AND ASSOCIATES
Psychiatry

Frank H. Chesky, M.D.
Jose A. Gutierrez, M.D.
Harris M. Hauser, M.D.
Linda S. Blume, A.C.S.W.

7777 Southwest Freeway, Suite 1004, Houston, Texas 77074; 713 772-4600

1740 West 27th, Suite 315, Houston, Texas 77008; 713 772-4600

Psychiatry & Neurology

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., J. J. Leyva, M.D.

Department of Psychology
Allen Goss, Ph.D., Jim M. Phillips, Ph.D.

Practice Limited to Neurology and Psychiatry
Office Hours By Appointment

First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

STEPHEN WEISZ, M.D.
Practice Limited to Neurology and Psychiatry

1637 Medical Arts Bldg., Dallas, Texas 747-5183

THE FORT WORTH NEUROPSYCHIATRIC CENTER
•Herbert G. Rush, M.D.
A. Arauzo, M.D.
Sanford Lehrer, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

•Diplomate American Board of Psychiatry and Neurology

H. KORNBLIT, M.D.
Neurology—Headache Clinic

Memorial City Prof. Bldg. #176
902 Frostwood, Houston, Texas 77024

HAUSER CLINIC
Psychiatry and Neurology

Section of Psychiatry
•Abe Hauser, M.D.
•Robert I. Hauser, M.D.
•H. James Stuart, M.D.
•Javier A. Zapata, M.D.
•Susan B. Darsey, M.D.
•Harvey A. Rosenstock, M.D.
•Cal K. Cohn, M.D.

Section of Neurology
•Gerald Ratinov, M.D.

Section of Social Work
Pamela Plimmer, A.C.S.W.
Marguerite Papademitriou, A.C.S.W.
Wendy Smolins, M.S.S.W.

Administrator
Richard J. Kurzenberger

7777 Southwest Freeway, Suite 1036, Houston, Texas 77074
Telephone 713 776-8600

•Diplomate, American Board of Psychiatry and Neurology

MEMORIAL NEUROLOGICAL ASSOCIATION
Neurology, Electroencephalography, Electromyography and C. T. Scan

James L. Frey, M.D.
Harris M. Hauser, M.D., F.A.A.N.
Cheor J. Kim, M.D.
Lorenzo Lorente, M.D.

1740 West 27th, Suite 315, Houston, Texas 77008, 713 861-4516
427 West 20th, Suite B100, Houston, Texas 77008, 713 868-4552
7777 Southwest Fwy., Suite 1004, Houston, Texas 77074, 713 772-4600

HAUSER PSYCHIATRIC ASSOCIATES
Psychiatry and Neurology
•Ronald J. Hauser, M.D., F.A.P.A.

Individual and Group Therapy
Marital and Family Counseling

Laurence J. Gross, M.S.W., S.P.
Judy Kanas, M.S.W., S.P.

•Diplomate, American Board of Psychiatry and Neurology

9100 Westheimer, Suite 40
Houston, Texas 77063; 781-6742

ROBERT R. PIERCE, M.D., P.A.
Diplomate (Neurology) American Board of Psychiatry and Neurology

Neurology and Electroencephalography

Medical Towers Building, Suite 608, 6608 Fannin, Houston, Texas 77030
713 795-4163

Radiology

ROYAL WERTZ, M.D., F.A.C.R.
Practice Limited to Radiology

800 Rusk Street, Amarillo, Texas 79106, 373-8324

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D., D.A.B.R.

RADIOLOGY
109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

KARL THORD DOCKRAY, M.D.
Diplomate, American Board of Nuclear Medicine
Diplomate, American Board of Radiology

Roentgenology, Nuclear Medicine, Xeromammography

763-5774 Office 765-7701 Page 762-0471 Mobile
Lubbock, Texas

SRINI MALINI, M.D.
Diagnostic Ultrasound

1513 Medical Towers Bldg., Houston, Texas 77030, 713 795-5672

TMA Action/TMA Legislative Bulletin
. . . Another service of your association

Texas Continuing Education Directory
. . . Another service of your association

Rheumatology

DON E. CHEATUM, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204, 823-4151

ROY M. FLEISCHMANN, M.D.
Diplomate American Board of Internal Medicine and Rheumatology

Rheumatology Consultation by Physician Referral

3707 Gaston Avenue, Suite 810, Dallas, Texas 75246; 827-0868

Thoracic Surgery

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.
Maruf A. Razzuk, M.D.
DRS. PAULSON, URSCHEL, RAZZUK AND ASSOCIATES
Thoracic and Cardiovascular Surgery
1201 Barnett Tower
3600 Gaston Avenue, Dallas, Texas 75246; 824-2503

JOHN L. KEE, JR., M.D.
Thoracic Surgery

The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246; 826-5184

ALLAN L. GRAHAM, M.D., F.A.C.S.
KARAMAT U. CHOUDHRY, M.D., F.A.C.S.
Diplomates American Board of Surgery and Board of Thoracic Surgery
ROBERT W. MILEY, M.D.
Diplomate American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
800 Eighth Ave., Suite 626, Fort Worth, Texas 76104: 332-7878

HECTOR O. YANES, M.D., P.A., F.A.C.S., F.A.C.C.
Cardiac, Vascular and Thoracic Surgery

Diplomate American Board of Surgery and
American Board of Thoracic Surgery

432 Medical Plaza, 800 Eighth Ave.,
Fort Worth, Texas 76104, 332-1947

RICHARD E. WOOD, M.D.
Cardiac, Thoracic and Vascular Surgery
Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890

Hours By Appointment

Hugh E. Wilson, M.D. and Associates
HUGH E. WILSON, M.D.
CHARLES T. MEADOWS, M.D.
Thoracic and Cardiovascular Surgery
6161 Harry Hines Boulevard
Dallas, Texas 75235; 214 637-3470

"Every man owes some of his time
to the upbuilding of his profession"
—Theodore Roosevelt

Take an active role in TMA and your county society.

Urology

JO C. ALEXANDER, M.D., FOSTER FUQUA, M.D.,
ELGIN W. WARE, JR., M.D., GEORGE E. HURT, JR., M.D.,
DONALD E. JOHNSON, M.D. & ASSOCIATES
L. MICHAEL GOLDSTEIN, M.D., THOMAS P. REILLY, M.D.
Urology

3600 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC
Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109

Dolphus E. Compere, M.D., F.A.C.S.
Grant F. Begley, M.D., F.A.C.S.
Hugh Lamensdorf, M.D., F.A.C.S.

Diplomates of American Board of Urology

H. M. GIBSON, JR., M.D., F.A.C.S.
ABEL GARDUNO, M.D.
Certified by American Board of Urology
Practice Limited to Urology

512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephone 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
NEWTON F. McDONALD, M.D.
JAMES E. MORNEAU, M.D.
Practice Limited to Urology

1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

DONALD J. NEESE, M.D.
Diplomate of American Board of Urology

Practice Limited to Urology

570 Park Plaza Professional Building
1213 Hermann Drive, Houston, Texas 77030; 713 524-3931
400 Medical Center Blvd., Suite 207, Webster, Texas 77598; 713 332-2466

EUGENE R. TODD, M.D., P.A.
Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology

Urology—Adult and Pediatric

3434 Swiss Ave., Suite 406, Dallas, Tex. 75204, 214 826-3500

DALLAS UROLOGY ASSOCIATES
David D. Reisman, M.D.
Donald J. Logan, M.D.
Allen S. Plotkin, M.D.
Donald L. McKay, M.D.
Practice Limited to Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

JOSEPH D. MITCHELL, JR., M.D.
TROY W. SCOTT, M.D.
Urology

Barnett Tower, Suite 906, Baylor Medical Plaza,
3600 Gaston Avenue, Dallas, Texas 75246

Cassette tapes now available of the TMA's 1977 Conference on Medical Service!

For additional information and order form, see page 46.

Classified Advertising

Physicians Wanted

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from the big city problems. Call collect Dr. David M. Pogue, at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. Taylor Smitb, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Taylor Smitb, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telepbone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11tb Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIAN AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6383.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

EMERGENCY DEPARTMENT GROUP, HOUSTON AREA, EXPANDING—choice of salary or fee-for-service with guarantee—malpractice paid—Call 713-861-7942 or write Greater Houston Emergency Physicians Association, 625 West 19th, Houston, Texas 77008.

FAMILY PRACTICE—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas 512-672-2811.

FAMILY PRACTITIONER WANTED to join two established family practitioners in Trinity, Texas. Former partner is leaving November 1976 for residency. A large ready made practice is available now. You are invited to investigate clinic and hospital facility, compatibility, economic and environment of rural practice in an outstanding recreational area that includes 2,000,000 acres of East Texas forest, 90,000 acre Lake Livingston, various golf courses, marinas, and country club developments. All guarantees, etc. are negotiable. Bring your wife. Sam R. Barnes, M.D. and J. Richard Cook, M.D., P.O. Box 672, Trinity, Texas 75862.

GENERAL PRACTITIONER NEEDED: To work with general surgeon doing GP work. Excellent opportunity for a doctor desiring family practice work. May start with salary of $45,000 per year negotiable. City has population of 9,000 with trade area of 25,000 to 30,000. Contact Chris S. Cruzcosa, M.D., 300 S. 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

GENERAL SURGEON: American graduate, preferably just out of residency to do all major surgery for well established clinic. Please reply to Ad-722, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTICE, GENERAL PRACTICE—Wanted immediately to join physician staff in rural community one-hour from Dallas-Fort Worth area. Extremely active practice with good benefits and an opportunity to enter into the corporation. Practice is with physicians clinic, 26-bed hospital, and 42-bed nursing home within the same building complex. Excellent arrangement for family practice. For further information contact Roger E. Marks, M.D., 817-897-2215 or 817-897-4436; Glen Rose, Texas.

GENERAL INTERNIST AND FAMILY PRACTITIONER NEEDED to join nine man group in Clifton, Texas. Located in the heart of Texas, 30 miles NW of Waco; 15 miles from Lake Whitney. Good fishing; excellent hunting; new modern golf course. Excellent schools and churches in a growing progressive community and directly associated with a 75 bed, Hill Burton hospital which is fully accredited by the joint commission. Terms open at first with partnership in future. Please contact V. D. Goodall, M.D., Clifton Medical & Surgical Clinic Association, Clifton, Texas 76634. Telephone 817-675-8621 or 675-3113.

PUBLIC HEALTH DIRECTOR: The City of Austin, Texas, is accepting applications for the position of Director, Austin-Travis County Health Department. Full medical and administrative direction of local public health activities in a $4 million department of the City. Must be an MD with administrative experience; Texas license and MPH preferred. Salary starts at $35,000+, depending upon qualifications. Send resume to: Dan H. Davidson, City Manager, P.O. Box 1088, Austin, Texas 78767; 512-477-6511. Equal employment opportunity.

PHYSICIANS WANTED—Growing hospital in progressive East Texas town near metroplex needs ambitious physicians to join staff. Write Paul Bennet, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75647.

INDUSTRIAL PHYSICIAN TO JOIN multispecialty group as an addition to a large industrial department. Some surgical training desired; family practice boards acceptable. Work consists of pre-employment physicals, industrial injuries, and family practice. Salary and partnership negotiable and competitive. Keogh plan available. Adequate time off. Modern clinic facilities. Growing town of 125,000. Send curriculum vitae and references to Harry Ledbetter, M.D., 1518 Tenth Street, Wicbita Falls, Texas 76301.

TEXAS, NORTHEAST: Emergency physicians. Immediate openings available in established ACEP oriented group. Positions in several communities available. Prefer career-oriented emergency MDs. Additional training and/or experience required. Flexible schedule, fee-for-service with guarantee and usual fringes including malpractice insurance. Write: Emergency Medicine Consultants, 3600 Gaston Avenue, Dallas, Texas 75246, or call 214-823-6850.

HOUSTON EMERGENCY PHYSICIANS ASSOCIATES has immediate openings for career oriented emergency physicians with surgical or emergency medicine backgrounds. Continuing education required. Teaching and non-teaching positions available in the city limits of Houston, Texas. Our physicians' present salaries are between $50,000 and $80,000 per annum based on tenure and experience. Flexible scheduling to allow for vacations and continuing education. Benefits include malpractice insurance, major medical, life, disability income. Call or send CV: Houston Emergency Physicians Associates, P. O. Box 36949, Houston, Texas 77036; 713-776-1081.

PRIMARY CARE POSITIONS available immediately. Assistance with travel, office overhead, and salaries or guarantees negotiable. For details send CV and preferences to Ad-725, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

NEED FULL TIME PHYSICIAN at medical facility of Gary Job Corps Center in resort community of San Marcos, Texas. Involvement is 8 a.m. to 5 p.m., Monday through Friday and on call alternate nights and weekends. Fringe benefits include a desirable housing arrangement and prepaid malpractice insurance. Salary upper $30s and negotiable. Contact Dr. M. D. Heatly, 512-396-6570 or at night 392-3044; or Mr. Al Martinez, Hospital Administrator, 396-6422; or write P.O. Box 645, San Marcos, Texas 78666.

STUDENT HEALTH SERVICE—Beautiful campus, competitive salary and benefits. East Texas recreational area. New clinic in planning. Contact Capt. A. C. Harris, USN (Ret.), Box 3058 SFA, Nacogdoches, Texas 75962; 713-569-4008.

THE HILLS OF HOME IS THE TITLE OF A BEAUTIFUL Scottish song. It is especially applicable to East Texas. Are you tired of traffic congestion, high overhead, hassles with office personnel, high crime rates? Do you long to own a farm or ranch of your own where you can enjoy nature? If so, write us as we are taking application from licensed physicians and psychiatrists. Our hospital is modern, JCAH approved, and program oriented. Salaries: Physicians, $32,800-35,800, depending on qualifications; Psychiatrists, $35,800-43,800, depending on qualifications. Housing available on the grounds. Contact Rusk State Hospital, Box 318, Rusk, Texas 75785; Dave Everly, 214-683-3411. An equal opportunity employer.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $10.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

EMERGENCY MEDICINE, DALLAS AREA: Immediate opening for full time, experienced emergency room ER physician. Flexible shifts. Competitive remuneration. Contact Dr. R. Murchison, 6350 LBJ Freeway, Suite 282, Dallas, Texas 75240; 415-472-0130 or 214-233-9088.

TEXAS PRACTICES. Economic and professional climate excellent. Have requests from physicians in Texas communities for additional physicians, usually in the same field. City suburbs, small and medium size towns. Attractive financial guarantees. No fee to physician candidate. Please write with C.V. and preferences to Sanford Smith, Professional Practice Management, Inc., 1102 Kingwood Drive, Humble, Texas 77339.

NEEDED: TWO FAMILY PRACTITIONERS, 40 bed hospital with hospital owned clinic, both fully equipped. Present active staff of two physicians. Financial arrangements negotiable with aggressive board of directors, unlimited growth. Caprock Hospital District, 901 West Crockett Street, Floydada, Texas 79235. Phone 806-983-2875, collect.

TEXAS, NORTH CENTRAL. Emergency physicians needed August 1, 1977 to complete full-time group in a 177-bed hospital. Excellent staff back-up. Small town near Dallas. Numerous recreational opportunities nearby. Call Kalman Shwarts, M.D., 214-872-5011 or 214-874-5611, ext. 300.

GENERAL PRACTITIONER TO DIRECT ALCOHOLISM PROGRAM. Building a better and more dynamic program in state hospital. Ideal family living town of 30,000—good schools, recreation, mild west Texas weather. Salary $37,000 to $40,000. Texas license required. Call or write: Douglas Cheney, Personnel Director, Big Spring State Hospital, Box 231, Big Spring, Texas 79720. 915-267-8216.

PRACTICE in the most sophisticated Texas city. Enjoy the small town atmosphere. Explore Pleasant Grove Hospital, first medical facility ever for 170,000 citizens in Southeast Dallas County. 172-bed hospital, now open, adjacent to professional building due completion September. Explore the possibilities with A. D. Hethcock, 214-398-1531.

INTERNAL MEDICINE—Opening now. One hour from Texas Medical Center. Multi-specialty group. 45 miles to Gulf. Excellent first year guarantee plus incentive and fringe benefits. Friendly community living with all the Houston amenities without big city problems. Contact Internal Medicine Search Committee, 3027 North Richmond Road, Wharton, Texas 77488.

DIAGNOSTIC RADIOLOGIST—trained in nuclear medicine, angiography, ultrasound to fill opening in four member radiology group with office and two hospitals in Lower Rio Grande Valley. Attractive fringe benefits and salary leading to full partnership. Send curriculum vitae. Drs. Martin, Chapa, Baker and Sokolosky, 1616 Ed Carey Drive, Harlingen, Texas 78550.

WANTED: BOARD QUALIFIED OR CERTIFIED INTERNIST to work in a three man group. Salary open. Good fringe benefits. Large, growing practice, in Texas Medical Center. Reply to 7000 Fannin, Suite 720, Houston, Texas 77030.

INTERNIST—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

CHILD PSYCHIATRY RESIDENCY may be taken before or after Adult Psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psychopharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services, and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed inpatient unit for children. Liaison with graduate schools, medical school and community programs. Stipends: first year, $15,000; second year, $16,000; third year, $17,000; fourth year, $18,000. Contact Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

PSYCHIATRIC RESIDENCY IN APPROVED three-year program. Effective connections with universities, medical schools, private clinics and community centers. Outstanding faculty and programs. Stipends with Texas license are $15,000, $16,000 and $17,000 per year. In addition, now offering residency in child psychiatry. For full information, write to: Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

EXPANDING MEDICAL CLINIC has opening for OB-GYN and family practice. Apply: D. McCann, 2616 North Oregon, El Paso, Texas 79902; telephone 915-532-5232.

CARDIOLOGIST - ONCOLOGIST/HEMATOLOGIST - GENERAL INTERNIST & PULMONARY medicine specialist needed to add to our 9-doctor IM group practice. We are a referral practice in new office, with new equipment adjacent to a private hospital. The hospital has a new Cath. Lab and CT scanner. Attractive financial incentive plan. Send CV to Robert L. Hatcher, M.D., Valley Diagnostic Clinic, 2121 Pease St., Harlingen, Texas 78550; 512-425-7200.

UNIVERSITY HEALTH SERVICE—DIRECTOR/STAFF. Needed, Director for Health Service, University of Texas Health Science Center at Houston. Staff physician also needed. Faculty rank Department of Family Practice of medical school. Specific patient care responsibilities for students and employees with emphasis on prospective medicine and those health maintenance programs as teaching and research models. Patient population about 8,000. Challenging opportunity. Salary competitive. Excellent fringe benefits including payment of malpractice insurance. Inquire: Chairman, Department of Family Practice, The University of Texas Medical School at Houston, Memorial Hospital, 7600 Beechnut, Houston, Texas 77074. Telephone 713-776-5160. Equal employment opportunity/affirmative action employer.

POSITIONS VACANT FOR TEXAS: Surgeon with thoracic surgery training wanted to join a busy solo practice summer of 1978. Opportunity to do general surgery while building up a thoracic practice. Board eligibility in general surgery required. Eligibility for thoracic surgery preferred. Please reply to Ad-735, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTITIONER AND PEDIATRICIAN NEEDED to join multi-specialty group in west Texas city of 175,000. New clinic and hospital facilities. Top salary with partnership opportunity. University Medical Surgical Clinic, 6602 Quaker Avenue, Lubbock, Texas 79414.

LOCATION AVAILABLE FOR GENERAL PRACTICE, wish to retire, will introduce. Contact M. C. Rittiman, M.D., 209 East Market Street, Sinton, Texas 78387; telephone 364-1201 or 364-2421.

INTERNAL MEDICINE/CARDIOLOGY—64 bed hospital in East Texas area with new fully equipped cardio-pulmonary department. Please contact Paul Bennett, Administrator, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75647; 214-845-2281.

INTERNIST AND TWO FAMILY PRACTITIONERS needed to complement present staff. Progressive city serving a trade area of 50,000. Excellent 100 bed accredited hospital. Great place to raise a family. Fishing, hunting and golf. Financial assistance, office available. Contact Billy W. Robertson, Wilbarger General Hospital, 920 Hillcrest Drive, Vernon, Texas 76384. Telephone 817-552-9351.

UNUSUAL PRIVATE PRACTICE OPPORTUNITITES now available in general practice and internal medicine, not cardiology oriented. Opportunities available in a 158-bed proprietary hospital, physician owned and operated. Medical success in your practice guaranteed by cash of $5,000 per month for a period of six months. Free rent and other benefits also included. Pasadena, Texas, is a progressive city of 150,000 located as a suburb of Houston, Texas, near the Johnson Space Center. Community enjoys high per capita earnings, open staff policies, and unlimited medical opportunities. Applications will be restricted to aggressive and American-trained physicians only. For additional information, write or call Richard Fly, Administrator, Pasadena General Hospital, 1004 Seymour, Pasadena, Texas 77506. Telephone 713-473-1771.

APPLICATIONS ARE BEING ACCEPTED for the position of Director of Public Health for the city of Lubbock. Annual salary is $40,000 (negotiable). Interested persons should contact: Tom Witt, Director of Personnel, City of Lubbock, P.O. Box 2000, Lubbock, Texas 79457; 806-762-6411, ext. 254.

Situations Wanted

DIAGNOSTIC RADIOLOGIST AVAILABLE January 1978. Will have completed University of Tennessee residency program including training in angiography, ultrasound and C.T. Seek practice opportunity in Central Texas. Write or call William Healy, M.D., 145 S. Greer, Memphis, Tennessee 38111. Phone 901-323-3737.

PEDIATRICIAN, 31, board certified and an associate fellow of the American Academy of Pediatrics. Pediatric residency served in university affiliated hospitals. Has 3 years experience of general pediatric solo private practice. Seeking general pediatric group practice, partnership, or hospital position in Houston, Texas. Reply to Ad-736, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SEEKING LOCATION. 33 years old, board eligible internist-nephrologist. Just finished residency in June 1977. Looking for group, solo, hospital based practice, associateship in nephrology preferably in a setting of hemodialysis unit. Will do internal medicine also. Available now. Please contact M. Ganesharajah, M.D., 50 South Munn Avenue, #420, East Orange, New Jersey 07018.

GENERAL SURGEON, Canadian, university affiliated. American board certified with 12 years experience in general and peripheral vascular surgery wishes to relocate. Contact Ad-737, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FMG from University of Mexico. Board eligible general surgeon with board experience in general practice. Interested in southwest Texas, doing general surgery alone if necessary, general practice, too. Group practice is preferred. All locations considered. Contact Ad-738, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED INTERNIST wishes to relocate in group private practice of full time position. Experience and interest in non-invasive cardiology and teaching. Large communities preferred. Available November 1977. Please reply to Ad-741, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN ASSISTANT, UTMB graduate, bilingual, seeks employment with liberal family, general or pediatric practice physician. Prefer multi-cultural practice within one hour of city and college. Betsy MacGregor, 3408 Norwood Hill Road, Austin, Texas 78723. Telephone 512-926-8449 or 713-762-8951.

WANTED: Position by retired unlicensed MD who needs to work. Prefer to work in family practice, medical, and/or emergency types. Good training. Can get along well with patients and physicians. Last practice 1974. Good health, no disability. No tobacco, alcohol or drugs. Will relocate. 512-447-1745. 900 South Lamar, #309, Austin, Texas 78704.

UROLOGIST, age 31. Will complete 5 year program June 1978. Board eligible, FLEX, available July 1978. Seeking solo, association, partnership, group or clinic practice in Texas. Please reply to Ad-742, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

AUSTIN—NEW PROFESSIONAL PARK. Int. Med., GP, FP, Peds, OB/GYN, ENT, Radiologist to associate in group setting for solo practice. University town, new hospital. Cannon Professional Park, 1110 William Cannon Drive, Austin, Texas 78745. Telephone 512-451-8484 or 512-444-1954.

GROWING NORTHEAST SAN ANTONIO, 55,000 population. No MDs. Five examining rooms, reception, large personal office, carpeted, air conditioned. Rent free details contact W. H. Gibson, 512-656-1166, night 512-651-6449.

HAVE A BEAUTIFUL OFFICE space available for one or two physicians. Prefer family practice. Population approximately 10,000; 10 miles to Georgetown Hospital; 22 miles to three Austin hospitals. Located 22 miles from Austin on Highway 183 North, in small shopping center. Please reply to Ad-739, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FOR SALE OR LEASE: Busy general practice office, with or without furniture and/or equipment, located in Robstown, Texas. Panelled interior, approximately 1250 sq. ft. contalning three treatment rooms, one lab (dark room only), large reception room, business office, one large bathroom, three closets, numerous built-in cabinets, tile flooring, one doctor's office carpeted. Good condition. If interested contact Mr. John North, 512-883-9387 or call 512-853-1531 for information.

ONE MOBILE RADIOGRAPHIC X-RAY FACILITY in excellent condition for sale or lease. Completely self-contained x-ray laboratory, consisting of a 22 foot air conditioned and vandal-protected Winnebago van, condenser discharge x-ray system with tubestand and table, Dupont daylight film loading system, Kodak automatic cold water film processor and all accessories. Very useful for care of nursing home patients, industrial screening examinations, athletic events, or disaster work. Contact Drs. Perilla, Sindler & Associates, P.A., 3350 Wilkens Avenue, Baltimore, Maryland 21229.

AUSTIN—Pediatric, family or general physicians, for Northwest Medical and Dental Plaza, Highway 183 and Fathom Circle, now preleasing for March 1978 opening. Already have leased to general dentist, pedodontic group, oral surgery group, periodontal group, ophthalmologist, optical store, pharmacy. Please reply to Ad-740, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GROWING WEST HOUSTON—Adjoining suites providing x-ray, lab, six exam rooms, two offices, two reception areas. Newly renovated building located Memorial-Westheimer area, convenient to hospitals. Pharmacy and dental offices occupied. Planning, layout available without cost. Lease negotiable. Contact C. Garner, 713-498-6725 or write Box 156, Alief, Texas 77411.

Business and Financial Services

PERSONAL FINANCING AND BUSINESS LOANS $5,000 to $50,000. Use for starting or expanding practice, equipment purchase, investment or debt consolidation. All details arranged by mail to your home or office. Write: Vern Britton, President, Financial Resources Co., Box 502-T, Richmond, Virginia 23204 or call 804-262-5969.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251. (Formerly HOME OF THE HOLY INFANCY)

Staff Physician

Shell Oil Company's Medical Department, at the Deer Park Manufacturing Complex near Houston, has an opportunity for an experienced physician. Will work with one physician and eight registered nurses.

The individual needs to be strongly oriented to clinical, occupational and preventive medicine. Previous industrial experience desirable, but not mandatory.

Salary competitive and commensurate with qualifications. For confidential consideration, please forward résumé to: P. L. Palfreyman, Department A, The Shell Companies, P.O. Box 2463, Houston, Texas 77001.

The Shell Companies

Shell Oil Co., Shell Chemical Co.,
Shell Development Co.,
Shell Pipe Line Corp.

An equal opportunity employer M F

MEDICAL MANAGEMENT CONSULTANTS

Providing the following services to the health care field:

1. Medical practice business management:
   a) Start-ups
   b) Ongoing
   c) Consulting
2. Leasing-Auto's and equipment (physicians only)
3. Investment and insurance counseling
4. Pension and profit sharing, consulting

PROFESSIONAL SYSTEMS & SERVICES, INC.

800 8th Avenue, Suite 404
Fort Worth, Texas 76104
817 335-7503

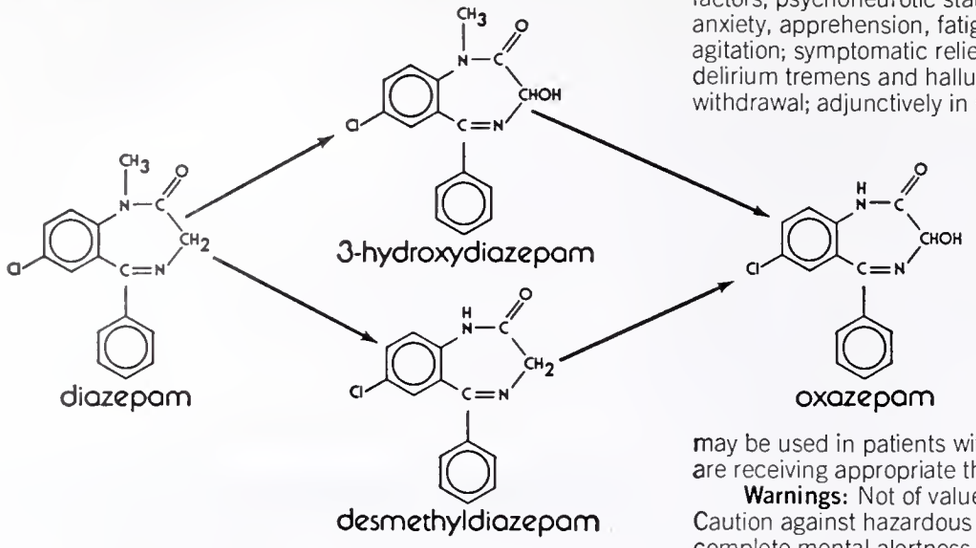
1701 Cedar Springs
Dallas, Texas 75202
214 742-2358

Advertising Directory

American Physicians Insurance Exchange	47
Arlington Neuropsychiatric Center	17
Beverly Hills Hospital	82
Blue Cross-Blue Shield of Texas	31
H. E. Eugene Bonham, M.D.	120
Burroughs Wellcome	101
Comatic Laboratories	3rd Cover
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
Flint Laboratories	83-84
Gentec Hospital Supply Company	24
Insurance Corporation of America	64-67
International Hair Transplant Symposium	47
Ives Laboratories	12
Mead Johnson Laboratories	4
Kelsey-Seybold Clinic	72
Eli Lilly and Company	48
Medical Arts Clinic of Corsicana	120
The Medical Protective Company	72
Nuclear Diagnostics	82
Park North General Hospital	18
Pennwalt Corp.	102-103
Professional Systems & Services	135
Pharmaceutical Manufacturers Association	104-105
The Prudential Insurance Company of America	9
Roche Laboratories	1,2,29,30,136
Roerig & Co.	18-19, 121
Schick Smoking Centers	36
Scott and White Clinic	Back Cover
Shell Oil Co.	135
Smith Kline & French	122
E. R. Squibb & Sons, Inc.	37-40
Starlite Village Hospital	17
Taos Medical Symposium	45
Texas Bank and Trust Company	18
Texas Medical Association	
Automobile Leasing Program	119
Memorial Library Fund	118
South American Adventure	5
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchings, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	120
Warner-Chilcott Laboratories	20,44-45
Wichita Falls Clinic	17
Physicians' Directory	123-132
Classified Advertising	133-135

Publication of an advertisement in *Texas Medicine* is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

A pharmacokinetic character all its own



Valium (diazepam) is a benzodiazepine with a distinctive pharmacokinetic profile

The pharmacokinetic profile of Valium is one of the characteristics that sets it apart from other benzodiazepines. Consider, in particular, the metabolic pathway of Valium. The three major metabolites of Valium exhibit significant pharmacologic activity—and so, of course, does the parent substance—diazepam itself. All combine to produce the characteristic clinical response seen with Valium. The response you have come to know, to want and to trust.

Pharmacokinetic studies also demonstrate that Valium has a pattern of absorption, distribution, metabolism and elimination that is reliable and consistent. And, although the pharmacokinetics of a drug cannot, at present, be specifically related to its clinical effects, it is clearly a factor that distinguishes one product from another by providing important insights into how each moves through the patient's body.

Valium® (diazepam) ℞

2-mg, 5-mg, 10-mg scored tablets

a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Editorials

LABELING PRESCRIPTION DRUGS USUALLY IS BEST FOR PATIENTS

Should a physician specify that prescriptions be labeled with the name and strength of the drug? As a rule, yes.

For years the TMA Board of Councilors has held that the individual physician should decide whether the patient ought to have the name of the drug included on the prescription label.

Today, changes in practice patterns and patient's mobility place even more responsibility on the physician to label when it is in the best interest of protecting the patient, and only in exceptional circumstances is it desirable not to let the patient know what drugs are being prescribed.

At its May 1977 meeting, the TMA House of Delegates, approved the following position statement prepared by the Board of Councilors:

"After thorough deliberation, the Board of Councilors strongly reaffirms its position that in the best interest of the patient, the prescription container should, as a rule, be labeled with the name and strength of the drug. This procedure is consonant with the ethics of medicine and pharmacy, and with the physician's responsibility to decide whether the prescription label should or should not identify the drug.

"The board urges that physicians always designate the number of refills the patient should have, and only the number of doses usually required be prescribed.

"The physician's responsibility for the patient's medical regimen is clear, and he should heed the pharmacist's request for specific instructions on renewals.

"In a less sophisticated era, when the art of medical practice outweighed scientific knowledge, physicians did not tell their patients the identity of prescribed medications. Today, this practice is being gradually abandoned, and increasing numbers of physicians ask pharmacists to indicate on the label the name and strength of the drugs they prescribe. The board believes that physicians should adopt this policy, unless disclosure would be detrimental to the welfare of the patient.

"The following points support the practice of labeling:

"1. The patient has the right to be informed about his illness and the medication prescribed.

"2. In emergency situations, such as accidental poisoning, overdosage, or attempted suicide, immediate identification of a prescription drug from the label may be lifesaving.

"3. The information is invaluable when the patient changes physicians, moves to another locality, or contacts the prescribing physician at a time when records are not readily available.

"4. The information is valuable in group practices when the patient may not always have the same attending physician.

"5. Patients with allergies should know what is being prescribed.

"6. Labeling helps prevent mix-up when two or more drugs are being taken concurrently, or between medications being taken by different family members.

"7. Should it become necessary to issue a warning against the use of a particular drug, labeling serves as a danger signal to those who have been given prescriptions for the drug.

"Physicians' major objections to labeling seem to be that it may lead to self-medication and "patient prescribing"; a patient who knows the drug name may compare prices at different pharmacies, thus tempting pharmacists to bid for business on a price basis rather than on a professional service basis; and the information may only confuse and trouble the patient."

The board believes that advantages of labeling outweigh these objections in almost every instance. The board recognizes that there are occasions when such labeling is inadvisable for psychological or other reasons, and that the physician is the one who must decide.

However, only in exceptional circumstances is it desirable not to reveal the identity of prescribed drugs under today's conditions. Moreover, the physician's explanation to his patient regarding the purpose of the prescribed drug, and what may be expected from it, together with the public's growing awareness of the effects of drugs (both beneficial and harmful), will help minimize problems which may occasionally occur.

BRITAIN'S EXPERIENCE WITH NHI OFFERS LESSON FOR AMERICANS

The British National Health Service, with its strikes, endless patient waiting lists, and crisis of confidence, is rightly said to be "seriously and chronically sick." Physicians are demoralized and frustrated. They are suspicious of the British government's intentions, for its cabinet ministers and civil servants, in concert with the media, have vindictively destroyed the image of the medical profession. This has led to the emergence of new professional groups, stronger labor unions, and consensus management with its resulting *paralysis administrans*.

The people are embittered and divided because their prosperity has disappeared as Britain's economic problems have increased. Their new ambassador to Washington, Mr Peter Jay, an articulate economist, predicted in 1975 that their society would collapse and their democracy would be suspended by 1980. It is indeed now almost too late to expect much from such a belated recognition of the problems.

Britain has now found by the hard way that it cannot afford a comprehensive health service. Nevertheless, the fascist-lefts in the Labour Party continue to advocate still further government inroads into medicine, proposing, for instance, to make private health insurance illegal. The labor unions want physicians paid as government servants who would then be totally at the mercy of bureaucrats and other politically motivated arbiters in health matters.

In the United States, Mr Joseph Califano, Secretary of the Department of Health, Education and Welfare, is preparing a procrustean bed on which American medicine must lie. He has said in effect that if the bed doesn't fit, then medicine must be altered to fit the bed.

Every American citizen must come to an appreciation of what national health insurance will mean in terms of increased taxes and further inflation. At the present time the national private and public debt is estimated at $2.7 trillion. Federal expenditures of health rose from $3 to $44 billion between fiscal year 1966 and 1978. A $25 billion trade deficit is forecast for this year. All of this is highly inflationary. What will happen when the tax burden to support $150-200 billion in federal health expenditures is added to our economy? If freedom for the individual is to be preserved, our national economy must regain its health.

There is still time to stop this. The medical profession should speak out courageously and clearly at this time of crisis. The future health of the country and its citizens depends upon the effectiveness with which doctors educate the public about the perils of national health insurance schemes. We have no choice but to make every effort to preserve a profession characterized by humanism and dignity and avoid becoming the servants of welfare tyranny.

Joseph M. Merrill, MD, Houston.

Nov77

TexasMedicine

Animal bites

Chronic asthma in children

The hypertensive child

Proposed changes in TMA's organizational structure and function

What's coming up in the House of Delegates

LIBRARY
U.C. SAN FRANCISCO
NOV 21 1977

THE LIBRARY
ACQUISITIONS DIV.
UNIV. OF CALIFORNIA, S. F.
SAN FRANCISCO CA 94143

Torbett-Hutchings-Smith Memorial Hospital
and Torbett-Hutchings-Smith Clinic

322 Coleman Street — Marlin, Texas 76661 — Telephone: 883-3561

Post Office Box 60

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.*
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

TRAUMATIC AND ORTHOPEDIC SURGERY
D. R. Swetland, M.D., F.A.C.S.

ALLERGY
S. W. Hughes, M.D.

CARDIOLOGY
W. F. McKinley, Jr., M.D.

OBSTETRICS AND PEDIATRICS
William Pickvance, M.D.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
Ronald E. Henderson, Jr., M.D.
David M. McTaggart, M.D.
S. M. Bunn, Jr., M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.*
Howard L. Smith, M.D., F.A.C.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

NEUROSURGERY
Harry W. Slade, M.D., F.A.C.S.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Associate Administrator:
Larry Parsons

Director-Coordinator, Nursing Service:
Vera Bee, R.N.

Director of Patient Care:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

*Expired May 17th, 1977.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street — DALLAS, TEXAS 75211 — Telephone 823-4151

INTERNAL MEDICINE
John B. Allen, M.D., D.A.B.I.M.
Morris E. Magers, M.D., D.A.B.I.M.
Channing Woods, M.D.
Richard C. Stone, M.D., Gastroenterology
Landon W. Stewart, M.D., D.A.B.I.M.
Cloyce L. Stetson, Jr., M.D., D.A.B.I.M.
David S. Sowell, III, M.D., D.A.B.I.M., Cardiology
Don E. Cheatum, M.D., D.A.B.I.M., and D.A.B. Rhu, F.A.C.P., Rheumatology
W. Mark Armstrong, M.D., D.A.B.I.M.
Sam W. Waters, M.D.
George E. Thomas, M.D., D.A.B.I.M.
Steven P. Bowers, M.D., D.A.B.I.M.
Carlos M. Kier, M.D., D.A.B.I.M., Rheumatology

ORTHOPEDIC SURGERY
George S. Phalen, M.D., D.A.B.O.S., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
John B. Miller, III, M.D., D.A.B.O.G.
Vernie D. Bodden, M.D.

PEDIATRICS
Halcuit Moore, M.D., D.A.B.P., F.A.A.P.
P. E. Luecke, Jr., M.D., D.A.B.P., F.A.A.P.
Larry Gray, M.D., D.A.B.P., F.A.A.P.

GENERAL SURGERY
George P. Fosmire, M.D., D.A.B.S., F.A.C.S.
Miller S. Bell, M.D., D.A.B.S., F.A.C.S.

UROLOGY
Harry M. Spence, M.D., D.A.B.U., F.A.C.S.
William H. Hoffman, M.D., D.A.B.U., F.A.C.S.
Richard B. Dulany, M.D., D.A.B.U., F.A.C.S.

RADIOLOGY
Raymond W. Burford, M.D., D.A.B.R.
Joe B. Caldwell, M.D., D.A.B.R.
James B. Evans, M.D., D.A.B.R.

DERMATOLOGY
William N. New, M.D., F.A.A.D., F.A.C.P.

OTOLARYNGOLOGY AND OTOLOGIC SURGERY
D. W. Shuster, M.D., D.A.B.O.

OPHTHALMOLOGY
R. M. Burnside, M.D., D.A.B.O.
James M. Copps, M.D., D.A.B.O.

DENTISTRY AND DENTAL SURGERY
J. Boyd Hollabaugh, D.D.S.
William F. Walton, D.D.S.
Larry L. Cowsert, D.D.S.

ADMINISTRATION
C. H. Rosamond, Administrator
Jack Green, Associate Administrator

DIRECTOR OF NURSING SERVICE
Miss Billye J. Norris, R.N.

INACTIVE STATUS
George M. Underwood, M.D., D.A.B.I.M., F.A.C.P., Gastroenterology
William H. Potts, M.D., F.A.C.P., Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics and Gynecology
Adam D. Green, M.D., Surgery
B. Celia Slaughter, M.D., D.A.B.P., F.A.A.P.
John B. Bourland, M.D., D.A.B.O.G.

Her next attack of cystitis* may require

The Bactrim™ 3-system counterattack

*Due to susceptible organisms

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Bactrim™ DS Double Strength Tablets

ROCHE

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Please see reverse side for summary of product information.

ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register,* 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Texas Medicine
VOL 73 NOVEMBER 1977

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION
Don G. Harrel, MD, Dallas
Chairman
Sam N. Key, MD, Austin
Vice-Chairman
Merle W. Deimer, MD, San Antonio, Secretary
Walter A. Brooks, MD, Quanah
R. Harvey Bell, MD, Palestine
C. W. Yates, MD, Rosenberg
Paul R. Meyer, MD, Port Arthur

TMA OFFICERS
John M. Smith, Jr., MD, San Antonio
President
A. J. Gill, MD, Dallas
Vice-President
Mylie E. Durham, Jr., MD, Houston
President-Elect
James G. Morris, MD, Lubbock
Secretary
Ben R. Keller, Jr., MD, Arlington
Treasurer
C. Lincoln Williston, Austin
Executive Director

EDITORIAL STAFF
1905 N Lamar Blvd, Austin 78705
Telephone: 512-477-6704
Marilyn Baker, Executive Editor
Rae Vajgert, Assistant Executive Editor
Elise David, Assistant Editor
Donna Billie, Editorial Assistant
Patty Mullins, Secretary

ADVERTISING STAFF
1801 N Lamar Blvd, Austin 78701
Jon R. Hornaday, Advertising Director
Anne Sheinutt, Advertising Manager

SCIENTIFIC PUBLICATION COMMITTEE
C. W. Daeschner, MD, Galveston
Chairman
Robert Askew, MD, Austin
Vice-Chairman
Ernest C. Butler, MD, Austin
Jesse D. Cone, MD, Odessa
Richard D. Cunningham, MD, Temple
George A. Gates, MD, San Antonio
Tracy R. Gordy, MD, Austin
David P. Green, MD, San Antonio
R. Maurice Hood, MD, Austin
Paxton H. Howard, Jr., MD, Temple
Daniel E. Jenkins, Jr, MD, Houston
Joseph Lancaster, MD, Austin
Francis E. McIntyre, MD, Austin
Paul C. Peters, MD, Dallas
H. Irving Schweppe, Jr., MD, Houston
Karen W. Teel, MD, Austin
Theodore P. Votteler, MD, Dallas

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104
SUBSCRIPTIONS
1801 N Lamar Blvd, Austin 78701
c/o Ray Riggs, Business Manager
$4 per year for members; $8 for nonmembers; $14 for foreign; $6 for libraries, hospitals, and universities; $4 for medical students. Single copy: $1.25.
CHANGE OF ADDRESS
1801 N Lamar Blvd, Austin 78701
c/o Edward R. Bierschenk, Membership Director
Copyright 1977 by the Texas Medical Association. Owned and issued monthly by the Association.
Second Class Postage paid at Austin, Texas, and additional mailing office, under act of March 3, 1879. Publication number 796660.
Postmaster: Please direct correspondence to Marilyn Baker, Executive Editor, 1905 N Lamar Blvd, Austin, TX 78705.

Contents

Scientific Articles

49 Animal bites as a public health disease Evret C. Newman, DVM

53 Advances in management of chronic asthma in children Susan C. Jacob, MBBS, DCH; Katharine H. K. Hsu, MD

59 Acquired hemolytic anemias of childhood Kenneth A. Starling, MD; C. Philip Steuber, MD; Dell A. Shepherd, MD

70 Evaluation of the hypertensive child Ben H. Brouhard, MD; Robert J. Cunningham, MD; Luther B. Travis, MD; Michael Berger, MD

76 Exercise prescription for young women Joel Rosentswieg, EdD

Features

78 Texas Medical Association considers reorganization plan

88 Wendell Hamrick, MD, receives TMA Distinguished Service Award

Editorials

123 Motor vehicle accidents in Texas: top cause of death in children J. R. Toledo, MD

124 Human resources board increases Medicaid services reimbursement

News

7 Reorganization proposal will highlight TMA House of Delegates November session

10 More than 850 attend TMA Conference on Medical Service

13 Board of Medical Examiners considers clinical laboratory billing law

14 TMA representative testifies at Houston NHI hearing

15 Reported measles cases increase in Texas

24 Neurosensory Center opens in Houston

25 UT advisory committees search for two institution presidents

25 Blue Cross plans get cost curb requirements

26 Texas Medical Association coordinates Physician's Placement Service

Departments

27 Capital Comments

34 Meetings

42 Continuing Education Courses

63 Information for Authors

90 Medical Newsmakers

92 Medicine in Literature

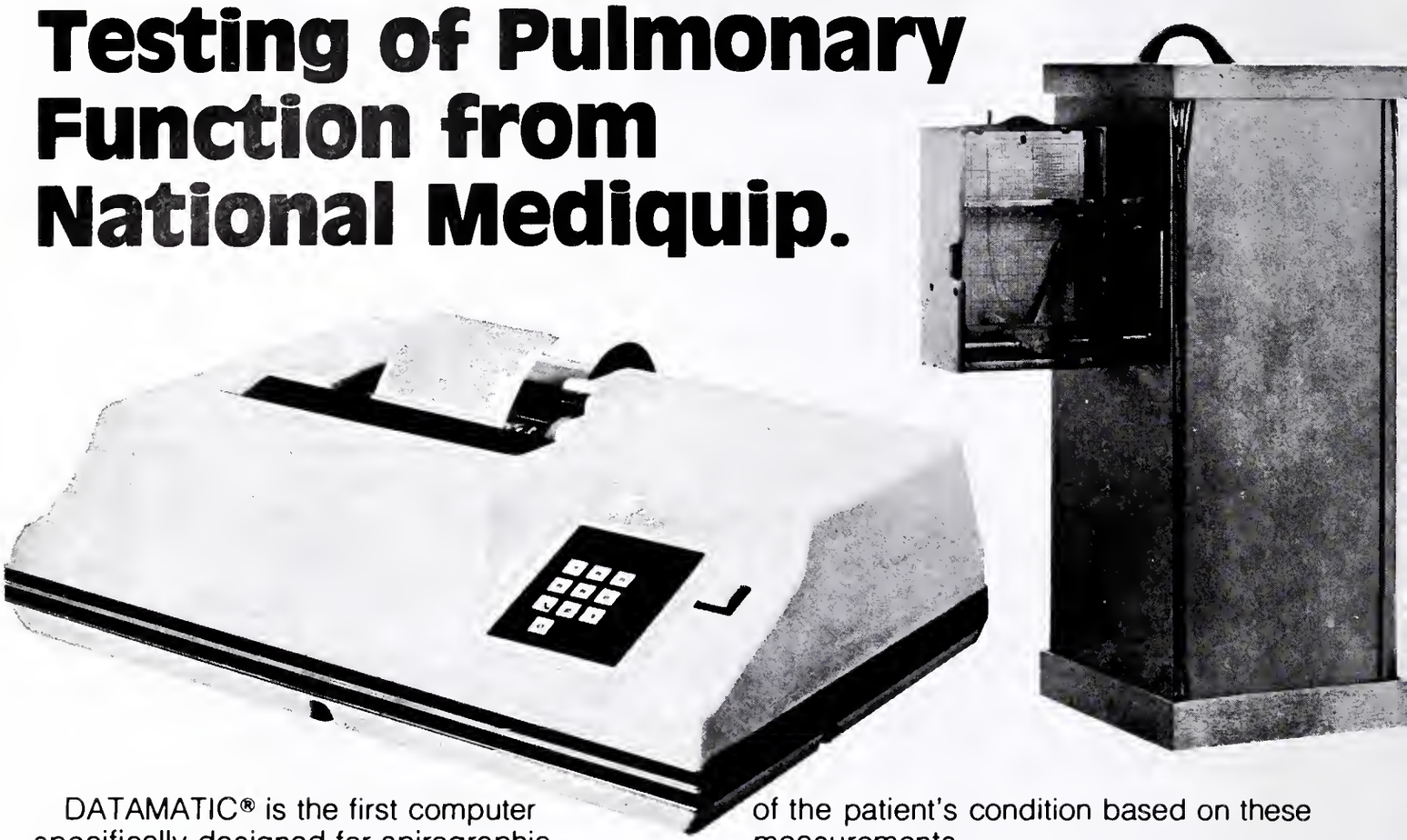
97 Medicine and the Law

99 Deaths

On The Cover

A sense of uneasiness pervades; can this worshipful family pooch really harbor a canine Mr Hyde? An El Paso veterinarian believes that animal bites should be considered as a specific disease entity rather than as accidental injuries or possible precursors to rabies or other infections. His article begins on page 49.

The Ultimate Combination in Quick, Accurate Testing of Pulmonary Function from National Mediquip.



DATAMATIC® is the first computer specifically designed for spirographic analysis. It provides automatic collection and validation of data, storage, mathematical determination and interpretation . . . and prints this information on a permanent hard copy record to help in the diagnosis and evaluation of treatment for respiratory patients. When combined with the Pulmonor Spirometer, it provides quick accurate testing of pulmonary function.

The result is a compact system for quick measurement of all vital pulmonary functions with the added advantage of a graphic display of results, an instant print-out showing numerical measurements and an interpretation of the patient's condition based on these measurements.

This system can save your office many dollars in time efficiency.

Immediate delivery is now available from National Mediquip, Inc., your single statewide source for a complete range of office diagnostic equipment.

For a complete descriptive brochure or for a demonstration in your office, write or phone:

national mediquip inc.

2121 Butler Street • Dallas, Texas 75235 • (214) 634-2110
1128 Pennsylvania • Ft. Worth, Texas 76104 • (817) 332-4121
6120 BelAir Blvd. #113 • Houston, Texas 77081 • (713) 777-9875
7150 Oak Lawn • San Antonio, Texas 78229 • (512) 341-2285

NATIONAL MEDIQUIP, INC.

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____

☐ Please send brochure.

☐ Please call to arrange a demonstration.

Do you think enough of your employees to provide the best?

You might get other group health insurance at lower rates. But in a dollar-for-dollar comparison, there are three simple reasons why Blue Cross and Blue Shield coverage is better:

1. It returns more of its premiums in claim payments to policyholders than most other major insurance companies.
2. And it doesn't set maximum dollar limits on most hospital services.
3. The Blue Cross and Blue Shield ID card admits members to most hospitals anywhere in the country, as simply as possible.

Blue Cross and Blue Shield coverage means a lot to your employees. And it shows *they* mean a lot to you.

Blue Cross
GROUP HOSPITAL SERVICE, INC
Blue Shield
GROUP LIFE & HEALTH INSURANCE COMPANY
of Texas

® Registered Mark Blue Cross Association
® Registered Service Mark of the National Association of Blue Shield Plans

News in brief

TMA House of Delegates

A major proposal for Texas Medical Association reorganization will highlight business of the Interim Session of the TMA House of Delegates in Austin in November. The TMA policy-making group will also consider reports and proposals about clinical laboratory billing, National Health Insurance, family practice residencies, state and federal medical legislation, medical cost containment, countersuits, and midwifery. The House of Delegates will meet Nov 12 and 13 at the Austin Hilton Inn . . . 7

Medical Service Conference

More than 850 physicians and guests attended TMA's Conference on Medical Service Sept 10 in Austin. The day-long session featured medical leaders, a US Congressman, and panel discussions about current medical topics. Medical leaders discussed a wide range of issues including national health planning, National Health Insurance proposals, state and federal medical legislation, cost containment proposals, and American Medical Association activities . . . 10

Clinical laboratory billing

Meeting in September to consider HB 1309, the clinical laboratory billing law, the Texas State Board of Medical Examiners voted to ask certain questions about the bill of the Texas Attorney General. A committee of the State Board of Medical Examiners will formulate possible regulations for HB 1309, and those regulations will be considered at the December board meeting. The new law will require physicians and other professionals who bill patients for tests which are performed by laboratories outside their offices to provide patients with the name of the laboratory and the amount paid for the tests . . . 13

National Health Insurance

Joseph T. Ainsworth, MD, chairman of the TMA Council on Medical Legislation, represented TMA at the recent National Health Insurance hearings in Houston. More than 70 speakers testified during the day-long hearing sponsored by HEW. "There is no conclusive evidence that citizens of Texas or the US are clamoring for a universal program," Dr Ainsworth said in his statement. TMA has not endorsed any National Health Insurance proposals presently before Congress, and is continuing to study proposals, Dr Ainsworth said . . . 14

News in detail

Reorganization proposal will highlight TMA House of Delegates November session

A major proposal for Texas Medical Association reorganization will highlight business of the Interim Session of the TMA House of Delegates in Austin in November.

The TMA policy-making group will also consider reports and proposals about clinical laboratory billing, National Health Insurance (NHI), family practice residencies, state and federal legislation, medical cost containment, countersuits, and midwifery.

The House of Delegates will meet Nov 12 and 13 at the Austin Hilton Inn.

Activities begin Friday Nov 11 with an open hearing to discuss the TMA Executive Board's report on reorganization. (For more information on the Executive Board report on reorganization see page 78.) The hearing will begin at 8 pm in the Austin Hilton Inn ballroom.

Registration for the House of Delegates will be from 7 through 10 am Saturday and 7 through 9:30 am Sunday.

All reference committees will begin hearings at 9 am Saturday, except for the Special Reference Committee on Reorganization which will convene at 10 am.

Resolutions

Resolutions about National Health Insurance, M.D. Anderson Hospital and Texas Poison Control Centers will be considered by the House.

The Tarrant County Medical Society has proposed a comprehensive statewide study of the feasibility and need for M.D. Anderson Hospital substations within the state. The medical society recommends that the cost of any feasibility study be financed by M.D. Anderson Hospital or some other state agency.

Three resolutions include proposals about National Health Insurance. The TMA Council on Medical Legislation is asking the TMA House of Delegates to reaffirm principles for evaluating NHI proposals that were adopted by the House in May 1975. The Council is also asking the House to endorse active participation of the TMA and the AMA in NHI debate in 1978.

The Harris County Medical Society proposes that the TMA House of Delegates oppose compulsory National Health Insurance in any form, with specific opposition to S 218 and HR 1818 (now supported by the AMA). The resolution proposes that no further organization dues money be expended for support of these or similar bills.

The Brazoria County Medical Society also asks the AMA to withdraw support of HR 1818 and S 218, and to oppose enactment of the Hospital Cost Containment Act proposed by President Carter.

The Council on Community Health Affairs has proposed that the TMA commend and appropriately assist the Southeast Texas Poison Control Center in projects such as its toll-free hotline, and that the TMA urge the Texas Legislature to provide adequate funding that would enable poison control centers throughout the state to reach proper quality levels.

Special Service award

The House of Delegates will recognize Philip R. Overton, former TMA General Counsel, with a Special Service Award.

Overton served as chief legal counsel for TMA from 1938 to 1976. He served the physicians of Texas for many years as General Counsel of the Texas Hospital Association, Texas Medical Association, and Blue Cross-Blue Shield.

From 1963-65 he was a member of the Governor's Special Committee for Eradication of TB and the Committee for Mental Health Planning. He also served as a member of the Texas Tuberculosis Association's Board of Directors.

TMA membership

The Board of Councilors is proposing an amendment concerning membership in county medical societies. The Board recommends that no physician or medical student may become a member of the county medical society without also maintaining membership in the district medical society, if organized, and the Texas Medical Association, since the county medical society is a component organization chartered by the TMA.

AMA delegates

The TMA delegates to the AMA are asking for an appropriate low-cost membership identification badge to wear to sessions of the TMA House of Delegates, Association Fall and Winter Conferences, and the May Annual Session.

1978 Annual Session

The Council on Annual Session reports that programs of 22 scientific sections, six committees, and 33 related medical organizations are planned for the 1978 Annual Session in San Antonio.

The Committee on Scientific Exhibits is asking that a special section of technical exhibits at Annual Session, such as sporting goods, travel, records, and hobbies, which are not directly related to the practice of medicine, be considered.

Medical student and resident sections

The report of the Council on Constitution and Bylaws includes constitutional changes for the new TMA Medical Student and Resident Physician Sections. The amendments were offered for first consideration at the May 1977 session of the House of Delegates, and will be considered for final vote in November.

The report of the Council on Constitution and Bylaws also includes constitutional amendments required by the Executive Board Report on TMA reorganization.

Family practice residencies

The Council on Medical Education and Hospitals includes a report on the new Texas Family Practice Residency Advisory Committee to the Coordinating Board, Texas College and University System.

The 12-member committee will advise on applications for approval and funding of family practice residency training programs and make recommendations on standards and criteria for approval of residency training programs. The residency advisory board was created by HB 282, passed by the 65th Texas Legislature, which allocates $3.3 million for medical residency training programs. HB 282 was supported by TMA.

State and federal legislation

The report of the Council on Medical Legislation provides informational reports on state and federal medical legislation.

The Council on Medical Legislation asks that TMA oppose the Hospital Cost Containment Act that restrains total hospital revenue, but not charges by a hospital to a patient. The Council points out that the bill ignores the increased costs to hospitals of drugs, food, taxes, utilities, malpractice insurance premiums, and other items.

Communication activities

The Council on Communication has proposed a plan to stress the need for additional legislation to more fully resolve the professional liability insurance crisis in Texas. The Council proposes that the TMA inform the various publics about the inadequacies of the professional liability legislation currently in effect and provide the TEXPAC-supported legislative candidates information about the professional liability issue.

Medical care costs

The Council on Medical Service has considered the role of the physician in controlling medical care costs.

The Council has reviewed recommendations made in 1969 by the Special Committee on Health Care Costs and suggests several of the same recommendations. The Council recommends that the physician and patient seek to reduce the number of days of hospitalization to the absolute minimum compatible with quality care. The Council also recommends that wherever possible, the physician should utilize extended care facilities, nursing homes, and home-care services.

Physicians should stimulate prepayment mechanisms on a voluntary basis and encourage all insurance carriers to provide comprehensive coverage for out of hospital services including those before and after hospitalization.

The Council also recommends that physicians should keep charges on the basis of usual, customary, and reasonable fees, with effective self-discipline and peer review to consider the size of the fee charged and the appropriateness of services rendered.

The physician should participate voluntarily in local and regional health planning to ensure that the best medical care will be provided at reasonable cost, the Council recommends.

The group also recommends that physicians should continue to search for ways to increase productivity and efficiency so that professional

The Texas Medical Association Insurance Program

is putting

in
Long Term Benefits
for
Partial Disability

We believe you will agree that "CLOUT" is appropriate to describe this new option under the Long Term Disability Income plan when you learn that total disability beyond the waiting period will not be required to qualify for partial disability benefits.

The new option bases qualification for claim payments on the extent of partial disability and the resulting loss of income over a period of six consecutive months, whether or not any total disability is involved.

Call it clout, equity or whatever. To us it makes sense not to require a period of total disability to qualify.

Watch your mail for complete details and enrollment forms.

Texas Medical Association Insurance Program

administered by the

TEXAS MEDICAL ASSOCIATION INSURANCE TRUST

1901 N. LAMAR BLVD., AUSTIN TX 78705 • (512) 476-6551

Prudential
Group Insurance

services can be produced most economically.

Five areas recommended by the Council where physicians can consider cost control, include practice management, the hospital, physician public education, community health/health planning, and alternate delivery system/insurance mechanisms.

Countersuits

In May the House of Delegates approved the principle of establishment of a special committee to review the merits of proposed countersuits by physician members against plaintiffs and attorneys involved in unjustified malpractice suits.

The Committee on Professional Insurance has developed organizational principles for the proposed TMA Committee on Countersuits. The guidelines state that the Texas Medical Association cannot file the countersuits, but the committee can advise physicians of its professional opinions concerning any potential countersuit. Under the guidelines TMA Legal Counsel will cooperate with the personal attorneys of individual physicians and provide them with resource material and information.

Also under the proposed operating guidelines, a physician receiving the services must be a TMA member in good standing. The original malpractice suit or claim must have been terminated in the physician's favor with no compensation in any form to the plaintiff patient.

Scoliosis screening

The Committee on School Health recommends approval of a statewide scoliosis screening program for school children. The committee believes it is necessary to inform physicians, school nurses, educators, and the general public about scoliosis screening.

Laetrile

The Committee on Cancer has recommended that Texas physicians not prescribe or dispense Laetrile for the treatment or palliation of cancer. The House of Delegates approved a similar position at the May 1977 session.

Lay midwifery

The Committee on Maternal and Child Health has been asked by the House of Delegates to study the effects of lay midwifery in Texas.

The Committee recommends that a budget be developed which would include gathering data on the number of lay midwife deliveries in 1976 by county, the maternal mortality statistics, perinatal mortality statistics, a match of maternal and fetal deaths, and a match to birth certificates with death certificates.

Fee profiles

Fee profiles in the Texas Medicaid program will be updated to 100% of the Medicare allowable in November 1977, reports the Council on Tax Financed Health Care Programs.

Regarding Current Procedural Terminology, fourth edition, the Council recommends that the TMA again go on record as adopting CPT-4 and that it accept the adoption proposed by Blue Cross-Blue Shield to initate the program.

Mental health

The Council on Tax-Financed Health Care Program proposes that the TMA request the Board of Mental Health and Mental Retardation to reactivate a Medical Advisory Committee on Mental Health and Mental Retardation composed of physicians from the TMA Committee on Mental Health and Mental Retardation and the Texas District Branch of the American Psychiatric Association.

More than 850 attend TMA Conference on Medical Service

More than 850 physicians and guests attended TMA's Conference on Medical Service Sept 10 in Austin.

The day-long session featured medical leaders, a US Congressman, and panel discussions about current medical topics.

Tom Nesbitt, MD

The chief challenge facing physicians is the great expectation that our society can maintain the quality of care, expand access to care, and significantly reduce health care costs, said AMA president, Tom Nesbitt.

"Since high quality medical care is by definition high cost care, this is a patently false expectation," he said.

Physicians must strive to moderate medical care costs as much as possible, Dr Nesbitt recommended, while maintaining high quality and making medical care accessible to all Americans.

The American Medical Association is responding in specific ways to doctors' needs, Dr Nesbitt said.

Within the past year, the AMA, as a last resort, has taken the case for American medicine in the federal courthouse when necessary.

In 1975 the AMA filed a suit against the Dept of Health, Education and Welfare's proposed hospital utilization review regulations.

"We were vindicated in that suit because the regulations, in the words of the district court judge who gave us a preliminary injunction, would 'delay and unnecessarily complicate medical matters and result in perceptible injury to patients.' "

The AMA has also joined in the protracted legal battle against the 1974 Health Planning and Resources Development Act, Dr Nesbitt said. "This act . . . which imposes five, federally-dominated and lay-controlled slabs of bureaucracy on health planning . . . could make a public utility out of American medicine," he said.

Kenneth Platt, MD

Physicians must accept the fact that public accountability is here to stay, said Kenneth Platt, MD, medical director of the Colorado Foundation for Medical Care.

Physicians should view this as an opportunity to share with the communities served the burden of their medical care, Dr Platt said.

"As a first step in establishing credibility and providing public accountability, I would encourage you to actively participate in the implementation of the provisions of Public Law 92-603," Dr Platt said.

Concerning health planning laws, Dr Platt said physicians must encourage other physicians to participate in the health planning process and to patiently educate the consumer members of planning agencies rather than retiring from the process.

Dr Platt said any National Health Insurance plan with a sole-source, publicly financed system, whether funded through a payroll tax or general revenue or a combination of both, must be opposed. "Our opposition should not be based on the self-serving attitudes of how this will affect our economic status or professional prestige but on the very obvious fact that it will in the long run be bad for our patients," Dr Platt said.

Rep Robert Krueger

Rep Robert Krueger, New Braunfels, told conference participants that he does not favor National Health Insurance.

"The basic problem with National Health In-

Rep Robert Krueger, center, a speaker at TMA Fall Conference, visits with physicians after his presentation.

When Southern Medical Association comes to Dallas, November 6-9, you'll get the following:

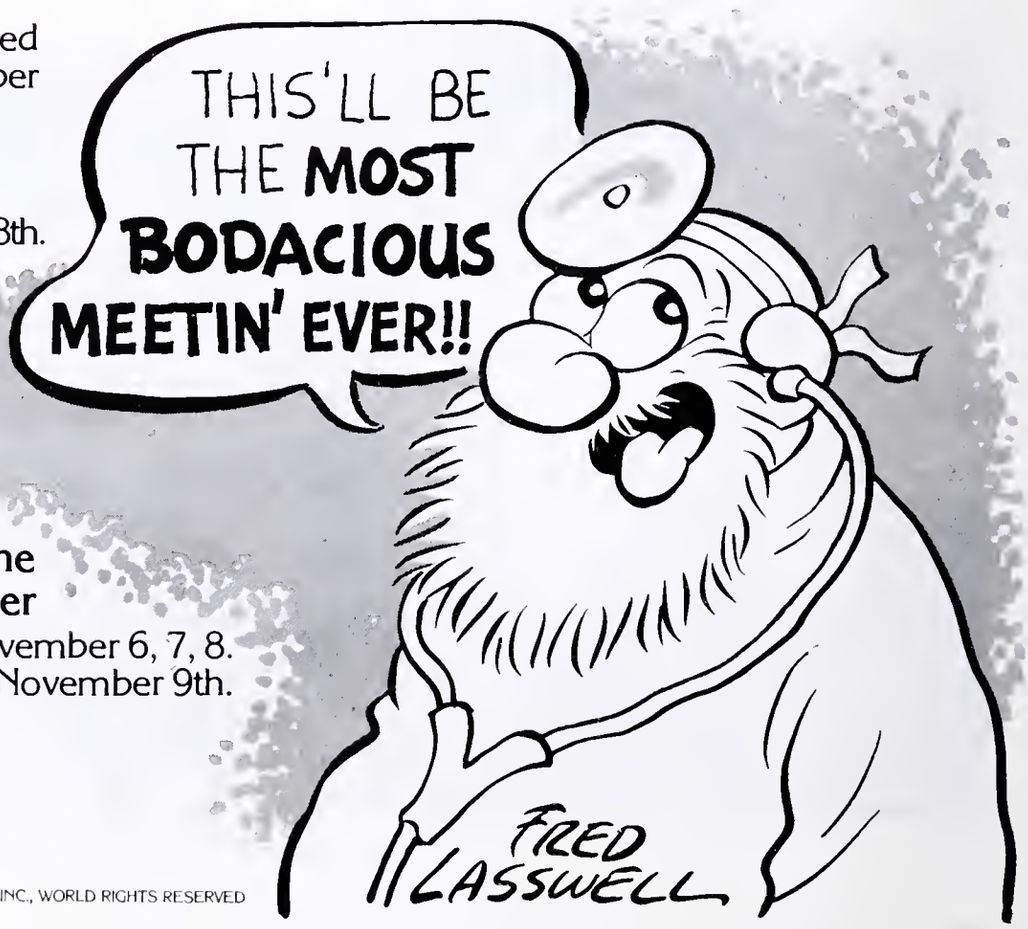
- 400 speakers offering AMA Category I credit
- Programs by specialists in 20 different disciplines
- 6 prescribed hours and 267 elective hours of credit from the American Academy of Family Physicians
- the widest selection of clinical material of any meeting in the country

William F. Buckley

Mel Torme

Plus...

- **William F. Buckley,** famed columnist is our November 8th luncheon speaker.
- **Mel Torme** is our entertainment for the dinner-dance November 8th.



For registration go to the Dallas Convention Center

8 A.M. to 5 P.M. — November 6, 7, 8.
8 A.M. to 12 Noon — November 9th.

©1977 KING FEATURES SYNDICATE, INC., WORLD RIGHTS RESERVED

surance as a solution to our perceived health care difficulties is that NHI freezes the present mix of services and organization.

"The tragedy of the unchecked groundswell for National Health Insurance as a solution to our most pressing problems as consumers of medical services is that any NHI program will require such a massive commitment of funds and supervision from the government that we will have no resources to apply to a proper definition of our problems and the appropriate solutions that could result in the possibility of better health for Americans," Rep Krueger said.

He told Texas physicians that if the medical profession does not take back some of the leadership it has given up, physicians will find non-medical groups designing programs.

Society is calling for innovative, progressive approaches, but it will settle for government-financed fiascos in the name of social welfare, Rep Krueger warned.

Ralph S. Emerson, MD

"We can anticipate more regulations with government subvention as public monies provide an increased percentage of the health care dollar," warned Ralph S. Emerson, MD, president of the Conference of Presidents and State Medical Society Officers.

"Our secret weapon is our patients who will not permit the government to politicize medicine, provided that our efforts and acts are in the public interest and are structured to serve society," he said.

Dr Emerson predicted that there will not be a National Health Insurance plan until the administration can devise a method to shrink the health care system.

"Shrinking the health care system is unpalatable and onerous in many respects. However, it must be done if we are to survive in this insane inflationary economy," Dr Emerson said.

Panel discussions

A second morning session provided a panel discussion on major provisions on HB 1048, professional liability insurance in Texas, and future professional liability programs.

Milton V. Davis, MD, was moderator for the panel. Participants and their topics were Ace Pickens, JD, member of the firm of Brown, Maroney, Rose, Baker and Barber, TMA Legal Counsel, major provisions of HB 1048; David Lowe, vice president and secretary, The Medical Protective Company, possible impact of HB 1048 on insurance premiums; Sam Nixon, MD, enhancing doctor-patient relationships; E. Don Webb, MD, explorations of possible TMA sponsored insurance vehicles, self insurance trust, and risk control programs; and Jack D. Maroney, JD, member of the firm of Brown, Maroney, Rose, Baker and Barber, TMA Legal Counsel, the spectre of countersuits.

The afternoon panel discussion provided information for physicians about new state laws affecting physicians. Moderator for the panel was Ed W. Schmidt, MD.

Participants and their topics were Joseph T. Ainsworth, MD, billing for clinical laboratory service; Will Barber, JD, member of the firm of Brown, Maroney, Rose, Baker and Barber, the Natural Death Act; William F. Ross, MD, support of family practice residencies and other medical education bills; D. Clifford Burross, MD, licensing and authorization bills for allied health professions; and Val F. Borum, MD, drug and optometric legislation.

Board of Medical Examiners considers clinical laboratory billing law

Meeting in September to consider HB 1309, the clinical laboratory billing law, the Texas State Board of Medical Examiners voted to ask certain questions about the bill of the Texas Attorney General.

A committee of the State Board of Medical Examiners will formulate possible regulations for HB 1309, and those regulations will be considered at the December meeting of the board.

During the Sept 25 hearing, Ruth Bain, MD, Austin, and Ace Pickens, JD, a member of the firm of Brown, Maroney, Rose, Baker and Barber, TMA Legal Counsel, testified representing the Texas Medical Association.

Both asked for flexibility in any regulations the board considers.

The law will require physicians and other professionals who bill patients for tests which are performed by laboratories outside their offices to provide patients with the name of the laboratory and the amount paid for the tests.

TMA representative testifies at Houston NHI hearing

Joseph T. Ainsworth, MD, Houston, chairman of the TMA Council on Medical Legislation, testified representing the Texas Medical Association at an all-day public hearing on National Health Insurance (NHI) in Houston in October.

More than 100 meetings were scheduled by HEW throughout the country during October to obtain American's views on National Health Insurance.

More than 73 speakers submitted testimony at the all-day hearing in Houston.

"While the great debate continues, it is by no means a closed issue in the public's mind that, in fact, NHI's time has come. There is no conclusive evidence that citizens of Texas or the US are clamoring for such a universal program," Dr Ainsworth said.

A recent NBC survey showed that 48% of the respondents were opposed to a national program of health insurance paid by government through increased taxation, with 38% in favor and 16% undecided, he said.

A recent Gallup Survey indicated only 40% of the people were in favor of such a program when added taxes to finance the program are attached, Dr Ainsworth told the panel.

"The Texas Medical Association questions whether a National Health Insurance proposal would be in keeping with one of President Carter's campaign themes — that of a new realism about the capacity of the central government to manage social action programs effectively from Washington," Dr Ainsworth said.

The TMA, by use of its guidelines, will continue to evaluate the major NHI bills before Congress and those to be submitted, Dr Ainsworth said.

"However, it seems that advocates for most of the existing ones have made exaggerated claims that defy sober estimates of the suggested programs. Cost estimates are thrown around as if they were Coke bottles at a 4th of July picnic," he said.

Because of the conflicting claims, TMA has not endorsed any bill presently before Congress and is continuing its study of NHI.

In spite of its critics, the medical system in Texas and the US — which is pluralistic, complex and everchanging—has served its people well, Dr Ainsworth concluded.

TMA GUIDELINES AND PRINCIPLES FOR EVALUATING NHI PROPOSALS

1. Minimum federal involvement in administration of program
2. State jurisdiction over licensure of physicians and regulation of insurance
3. Minimum federal dollars in financing of programs for comprehensive coverage at the least possible cost
4. Funding through federal and state revenues and private funds, including employer-employee contributions for private health insurance, and individual tax credits as applied to premiums for full health care protection
5. No Social Security tax for financing
6. No Social Security administration of program
7. Cost-sharing by participating individuals and families and subsidy for the indigent scaled according to income
8. Use of private insurance on risk and underwriting basis
9. Comprehensive coverage (basic and catastrophic) for the entire population
10. Pluralism in method of health care delivery
11. Appropriate cost and quality control
12. Coordination and continuity of benefits
13. Mandated employer coverage (with acceptance of coverage being voluntary with the employee) to be considered as an anticipated alternative mechanism

Reported measles cases increase in Texas

The number of measles cases being reported in Texas has increased tenfold over the number being reported during the same period last year.

In August 1977, 1888 cases had been reported, and in August 1976, 195 cases had been reported.

This large increase in reported measles cases is a cause for concern when the possible complications are considered, says the Texas Department of Health.

Complications including deafness, pneumonia, encephalitis, and death do occur from the disease.

This year, there have been five deaths from measles in Texas. This is the largest number of deaths attributed to measles in Texas since 1972 when five deaths were recorded for 1,617 cases of reported measles.

According to health department data, more than 50% of this year's reported measles cases are occurring in school-age children.

Measles immunizations can curb the threat and should be stressed, the health department advises.

Baylor establishes off-campus family practice training site

Baylor College of Medicine has established its first permanent off-campus training site for family practice residents and medical students at the Baylor Center for Medical Education in Waco.

Christian N. Ramsey, MD, president, McLennan County Medical Education and Research Foundation, has been appointed to the faculty of Baylor College of Medicine to direct the program.

The McLennan County education program is a model for graduate medical education in smaller communities. The program has 18 residents and ten paid faculty members.

In the program some of the Baylor family practice residents may be selected to spend their first year of training in Houston and complete their final 24 months in Waco.

With the new agreement, all of Dr Ramsey's family practice residents in Waco have been recognized as students of Baylor College of Medicine's graduate medical education program.

In the long term, Dr Ramsey hopes to establish clinical opportunities in Waco for Baylor medical students, possibly as a required core rotation. "Even if an individual plans a career in neurosurgery, I believe it is essential that he or she be exposed to family medicine and that each developes communication skills from which patients and their families will benefit," Dr Ramsey said.

Institute of Medicine publishes computed tomographic scanning report

The Institute of Medicine has published a report including recommendations about Computed Tomographic Scanning.

The policy includes a recommedation that third-party payers should provide reimbursement only for services provided by Computed Tomographic Scanning installations approved under a certificate of need program.

The Institute also recommends that third-party payers should provide reimbursement only for examinations approved under a utilization review program satisfactory to the payers.

The report also recommends that professional fees for the interpretation of Computed Tomographic Scanners should be set at a rate which eliminates excessive profits.

Copies of the report are available from the Printing and Publishing Office, National Academy of Sciences, 2101 Constitution Ave, NW, Washington, DC 20418. Cost is $5.

HEW will enforce legislation dealing with handicapped

The Dept of Health, Education, and Welfare has begun enforcing the 1973 civil rights legislation prohibiting discrimination in dealing with the handicapped either as patients or employees.

Physicians who receive compensation for services through Medicaid in addition to private and individual sources are responsible for providing care for and hiring personnel from handicapped in a nondiscriminatory way.

Under these regulations, all designated recipients of federal funds are required to hire qualified handicapped persons and to provide auxiliary aids needed for their work.

Physicians are also required to make their

services fully available to all handicapped persons and to provide any special accommodations necessary to their receipt.

Special regulations for entities, including private physicians, employing fewer than 15 people exempt them from certain administrative obligations designed to monitor employment practices.

While no person can be denied treatment on basis of handicap, including alcoholics and drug addicts, these special provisions also enable physicians to refer handicapped persons to other health care facilities if their own physical facilities are inaccessible to such persons and if no alternative arrangements for providing care can be made.

Thus, under most circumstances, physicians will only be obliged to adapt their physical facilities to the needs of a handicapped employee, rather than undertake immediate renovation to make their facilities and services accessible to persons with all kinds of handicaps.

Because the great number of individual physicians makes enforcement difficult, ". . . the Office of Civil Rights will concentrate its compliance efforts on the state Medicaid agencies and will look primarily to them to ensure compliance by individual providers."

Hospitals, clinics, and other entities employing 15 or more persons must comply with all regulations, including those which require addition of whatever special physical facilities are necessary to enable handicapped persons both to work at positions for which they are qualified and also to receive the services offered by such entities to the general public.

Special arrangements necessary for successful treatment under all circumstances, such as provision in emergency treatment facilities for communication with the deaf, must be made.

Texas Tech University opens El Paso Regional Academic Health Center

The El Paso Regional Academic Health Center building of Texas Tech University School of Medicine was dedicated in September.

Established in El Paso, the Regional Academic Health Center had been operating from leased space in R.E. Thomason Hospital and The University of Texas Nursing School offices.

The new $1.4 million, two-story structure, located at 4800 Alberta Street, is adjacent to R.E. Thomason Hospital. It encompasses office space, classrooms, meeting rooms, library and auditorium.

Birth and death rates decline in the United States

Birth and death rates declined in the United States in 1976.

According to Census Bureau statistics, the birth rate in 1976 was 14.7 per 1,000 population, down slightly from the rate in 1975 and from the 14.9 births per 1,000 recorded in 1974.

Last year 8.9 people per 1,000 population died, a figure almost unchanged from the 1975 total but down from 1974's 9.2 deaths per 1,000.

The US population rose .7% to an estimated 216,022,000 people in 1976. The Census Bureau estimates that the population is growing by about 1.6 million people a year.

New partial disability plan available under TMA insurance program

A new long term benefits plan for partial disability becomes available Nov 1 on an optional basis under the TMA Disability Income Plan.

Under the new plan physicians will not be required to be totally disabled to qualify for partial benefits.

Richard L. Vardy, MD, chairman, TMA Committee on Association Insurance Programs, said this feature will provide equity in payments since many impairments result in loss of income without involvement of any total disability.

For more information write the TMA Insurance Trust, Texas Medical Association, 1901 N Lamar Blvd, Austin, TX, 78705.

BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY

INPATIENT-OUTPATIENT

DEPARTMENT OF ADOLESCENT PSYCHIATRY

A Private 82 bed psychiatric hospital located in Oak Cliff on 18 acres amidst natural wooded surroundings. A multi-approach treatment center of neurologic and all psychiatric disorders. Treatment modalities include Somatic Therapy, Milieu Therapy, Chemotherapy, Individual and Group Therapy and Behavior Modification. Complete facilities for OT-RT under the direction of trained personnel. An individually directed program based on full diagnostic evaluation and actual performance administered by a staff skilled in special education and problems of the adolescent and young adult.

PSYCHIATRY

Jackson H. Speegle, M.D.
Fred H. Jordan, M.D.
Joseph H. Lindsay, M.D.
John T. Holbrook, M.D.

PSYCHOLOGY

George R. Mount, Ph.D.
Tom I. Payton, M.S.
Patrick R. Barnes, M.S.

DIRECTOR OF NURSES
Nita Ivey, R.N.

SOCIAL SERVICES
Beth Rutherford, M.S.W.

COURTESY STAFF

DIRECTOR OF EDUCATION
William E. Nix, Ph.D.

O.T. AND R.T. THERAPY
Director
Chequita Dian Badger, B.S.

1353 N. WESTMORELAND AVENUE, DALLAS, TEXAS 75211 **214 331-8331**

Nuclear Diagnostics

OFFERING SPECIALIZED REFERENCE SERVICE FOR RADIOASSAY PROCEDURES

AUSTRALIAN ANTIGEN
CEA
CHORIONIC GONADOTROPIN-B SUBUNIT
CORTISOL
CORTISOL, URINARY
DEHYDROEPIANDROSTERONE
DIGOXIN
DILANTIN
ESTRADIOL
ESTRIOL, TOTAL
ESTRIOL, UNCONJUGATED
ESTROGEN RECEPTORS
ESTRONE
FOLATE
FOLATE, RBC
FOLLICLE STIMULATING HORMONE
GASTRIN
GROWTH HORMONE
HCG RADIORECEPTOR PREGNANCY TEST
INSULIN
LUTEINIZING HORMONE
PLACENTAL LACTOGEN
PROLACTIN
PROGESTERONE
RENIN
TESTOSTERONE
T3 UPTAKE
T3 RIA
T4 RIA
THYROXINE, FREE
TSH
VITAMIN B-12

NUCLEAR DIAGNOSTICS
SUITE 110
7711 LOUIS PASTEUR DRIVE
SAN ANTONIO, TEXAS 78229
TELEPHONE (512) 690-8792

Randall C. Harper, M.D., FASCP
Elmore M. Averyt, M.D., FCAP
Ruskin C. Norman, M.D., FACR
Harold M. Brannan, M.D., ABNM, MACR
Fred W. Riley, Jr., M.D., ABNM, MACR
B. Mac Works, M.D., MACR
James R. Stewart, M.D., MACR
John E. Freeman, M.D., MRCP, FRCP
Joseph P. Miller, M.D., MACR

Wichita Falls Clinic

501 Midwestern Parkway East, Wichita Falls, Texas 76302

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.

GENERAL THORACIC AND VASCULAR SURGERY
Cecil H. Meares, M.D.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Richard H. Moore, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOLOGY AND RADIOACTIVE ISOTOPES
Thomas K. Bose, M.D.
Matthew Powers, M.D.

PEDIATRICS
Joseph Bilder, Jr., M.D.
George W. Slaughter, M.D.

INTERNAL MEDICINE
P. K. Smith, M.D., F.A.C.P.
I. L. Humphrey, Jr., M.D.
Preston McCall, M.D.
Julian C. Sleeper, M.D., Cardiology
David M. Pogue, M.D., Cardiology
Wendell I. Wyatt, M.D.
Lowell L. Harvey, M.D.

FAMILY PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
James T. Cook, M.D.
Madeleine Kent, M.D.

UROLOGY
John C. Wurster, M.D.

OBSTETRICS AND GYNECOLOGY
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
James M. Missler, Administrator

Bank Financing for Physicians

We specialize in equipment leasing and financing, unsecured loans and lines of credit to Physicians And we handle it all by mail.

Unsecured loans with optional dollar amounts (to $10,000), optional payment schedules. Equipment leasing to give you tax advantages, restore operating capital, convert unused depreciation to cash. And lines of credit to provide for future cash needs.

We charge tax deductible bank rates. You won't spend any of your valuable time at your bank, and you'll reserve your regular bank credit for times when you really need it.

For further information, complete and mail this coupon today. I want to know more about:

__ Unsecured Loans __ Sale & Lease Back Plans
__ A Line of Credit __ Lease-Purchase Plans
__ Equipment Leasing __ Equipment Financing
__ Other: _____

Dr. _____ Phone _____
Address _____
City _____ State _____ Zip _____

Professional Services Division
TEXAS BANK AND TRUST COMPANY
P. O. Box 101 Jacksonville, Texas 75766

BRIEF SUMMARY OF
PRESCRIBING INFORMATION

ANTIMINTH® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

When you're good people recognize you.

Highly effective
Single-dose convenience
Non-staining
Economical
Pleasant tasting

Antiminth®
(pyrantel pamoate)
equivalent to 50 mg pyrantel/ml
ORAL SUSPENSION

a drug of choice in pinworm infections

Please see brief summary of prescribing information on facing page.

©1977 LONE RANGER T.V., INC.

BREATHING WITH COMFORT.

Choledyl — a highly soluble, true salt of theophylline — rapidly relaxes bronchospasm to promote easier breathing. And, gastric discomfort is minimal.

Because Choledyl is more stable...more rapidly absorbed from the G.I. tract than aminophylline.

Available in both tablets and elixir for patients with obstructive lung disease.

Choledyl® (oxtriphylline) Tablets and Elixir CAUTION: Federal law prohibits dispensing without prescription. Each partially enteric coated tablet contains 200 mg or 100 mg oxtriphylline. Each teaspoonful of the elixir contains 100 mg oxtriphylline; alcohol 20%. *Indications.* Choledyl (oxtriphylline) is indicated for relief of acute bronchial asthma and for reversible bronchospasm associated with chronic bronchitis and emphysema. *Warning.* Use in pregnancy—animal studies revealed no evidence of teratogenic potential. Safety in human pregnancy has not been established; use during lactation or in patients who are or who may become pregnant requires that the potential benefits of the drug be weighed against its possible hazards to the mother and child. *Precautions.* Concurrent use of other xanthine-containing preparations may lead to adverse reactions, particularly CNS stimulation in children. *Adverse Reactions.* Gastric distress and, occasionally, palpitation and CNS stimulation have been reported. *Dosage.* Average adult dosage: Tablets—200 mg, 4 times a day; Elixir—two teaspoonfuls, 4 times a day. *Supplied.* 200 mg yellow, partially enteric coated tablets in bottles of 100 (N 0047-0211-51) and 1000 (N 0047-0211-60); Unit Dose—200 mg tablets (N 0047-0211-11); 100 mg red, partially enteric coated tablets in bottles of 100 (N 0047-0210-51). Elixir—bottles of 16 fl oz (1 pint) 474 ml (N 0047-0215-16). *Toxicity.* Oxtriphylline, aminophylline and caffeine appear to be more toxic to newborn than to adult rats. No teratogenic effects have been seen. Full information is available on request.

CH-GP-51-4/C

WARNER/CHILCOTT
Division Warner-Lambert Company
Morris Plains, N.J. 07950

CHOLEDYL®
(OXTRIPHYLLINE)

SINGLE-ENTITY
BRONCHODILATION
MINIMAL GASTRIC DISCOMFORT

Survey shows decline in televised violence

Public pressure on the television networks to reduce the amount of violence on the airwaves appears to be getting solid results.

The most recent survey by the National Citizens Committee for Broadcasting (NCCB), a two-week summer study funded by the American Medical Association, shows a 5% reduction of violence, on summer shows compared to the amount last fall.

The ABC network still holds first place as the number one violent network, according to the survey. Both CBS and NBC reduced showing the most serious forms of violence—beatings, killings, and rapes—by 16-17%. "Quest" and "Serpico," two of TV's most violent shows, have been canceled.

Whitehall Labs, makers of Anacin, tops the list of advertisers who sponsor the most violent programs. The new ranking procedure which takes into account the percentage of advertising during the violent programs also finds Best Foods, Burger King, Coolray Sunglasses, and Glennbrook Labs, makers of Bayer Aspirin, in the top ten.

Study finds employment opportunities good in health professions

Some of the best areas for job seekers are the health professions, according to a report on employment opportunities for graduates of Texas colleges and vocational programs.

The report, released by the State 1202 Commission on Postsecondary Educational Planning, said prospective job applicants in those fields should find the situation "very good" to "excellent" for landing a job.

The study was undertaken last fall at the request of Gov Dolph Briscoe. It will be updated each spring to aid high school and college students in making career decisions.

Graduates of computer and engineering programs also can expect "excellent" employment chances. Among other favorable ranked areas are stenographic and secretarial occupations and certain trade occupations such as air conditioning, industrial atomic energy and plumbing.

The job market is deemed "competitive" in numerous areas, including government and history, foreign languages, and the fine arts.

The report notes that opportunities in many fields increase if the prospective employee remains open to relocating in other parts of the state.

Brochures summarizing the information are available in local college placement offices and through high school guidance counselors.

American Medical Association delegates will meet Dec 4-7 in Chicago

The 1977 Interim Session of the AMA House of Delegates will be held Dec 4-7 in Chicago.

Sessions will begin at 2 pm Sunday, Dec 4 and continue through Wednesday, Dec 7.

For the first time the AMA's Winter Scientific Meeting, formerly know as the Clinical Convention, will be held separately from the House of Delegates.

The Scientific Meeting will be held Dec 10-13 in Miami Beach, featuring continuing education courses for physicians.

HEW releases corrected list of physicians and medical groups

The Department of Health Education and Welfare has released its corrected list of physicians and medical groups whose billings generated $100,000 or more in Medicare claims in 1975. The original list, published last March, cited 409 physicians.

Following the original release, the AMA conducted a survey of 208 of the 409 physicians and found an error rate of 65%. The survey shows that 64 physicians originally named did not have billings of $100,000. It also shows that payments to 338 physicians named on the earlier list represented group rather than individual income.

Among the 338 there were 24 cases in which the amount of reimbursement also was different.

Twelve names or addresses are corrected in the new release. It names 15 physicians who

claimed group affiliation, although carrier records show that payment was made for the physician's own services. There are two cases in which physicians disagreed with carrier records but did not furnish documentation, HEW said.

"I regret any inconvenience for physicians whose records were incorrectly reported on our original list," said HEW Secretary Joseph Califano. He said he intends to provide more information of this type in the future and plans to make sure that "such financial information is accurate and relevant."

Survey shows most Americans rate health care high

Most Americans rate the quality of their health care high, according to a recent Gallup survey, but these same people believe others do not get good care.

The public thinks older people and people living in rural areas get inferior care, but the older people and rural people themselves believe they receive high quality care.

The survey found that 69% of the public feel confident of their ability to pay the usual costs of health care. A smaller majority, 51%, is confident of being able to finance a major illness.

Public satisfaction with the last visit to a physician is extremely high—90%. Most people said they were satisfied with the treatment they got from the doctor's staff and with the time it took to get an appointment. About eight of ten people were pleased with the physician's explanation of their illness. About half believe that under national health insurance there would be an increase in unnecessary visits to physicians and that they would have to wait longer for care.

Public support for national health insurance varies in relation to public understanding of how much such a program would cost. About 67% believe there is a need for NHI but this figure drops to 40% when the question is expanded to include the added taxes to finance such a program. There is little support for NHI among those who feel the program would cost more than their current private health insurance.

Center for Disease Control says cholera risk small

Although several Middle Eastern countries have confirmed cholera outbreaks, the Center for Disease Control (CDC) says that the risk of developing cholera among United States travelers is small.

The CDC reports only seven confirmed cases of cholera among United States travelers in the last 17 years.

The Gilbert Islands and Jordan, Lebanon, the Syrian Arab Republic, and Saudi Arabia have recently reported confirmed cholera outbreaks according to the World Health Organization.

Several other Middle Eastern countries may also be affected, and imported cases have been reported by several Western European countries, but no secondary transmission within these countries is known to have occurred.

HEW issues guidelines for health planners

HEW has issued detailed guidelines for health planners that included a goal of fewer than four hospital beds per 1,000 population.

"The guidelines will help put brakes on construction of new hospital bed space and high-cost specialty services such as open-heart surgery and computerized X-ray scanning," said HEW Secretary Joseph Califano.

The proposals, which are not final, would immerse the federal government deeply into allocation of health resources in communities and regions across the nation.

Regional Health Systems Agencies, provided in the Health Planning Law and challenged in court by the American Medical Association, not only are told to aim for a four per 1,000 bed ratio, but in later years "will be required to indicate how they will reach a bed population ratio of 3.7 per 1,000," according to HEW.

The current national average is 4.4 beds per 1,000 population. The reductions proposed by HEW would eliminate some 100,000 beds of the present one million beds over the next seven years. The number of beds at present "is signifi-

cantly in excess of what is actually needed . . . and contributes to the high cost of hospital care with little or no recognizable health benefits," HEW said.

The guidelines propose that there should be an average annual occupancy rate of at least 80% for all non-federal, short-term hospital beds except under extraordinary circumstances. Exceptions would include small rural hospitals and facilities in areas with large seasonal changes in population.

The 205 local Health Systems Agencies were also advised on obstetrical services, pediatric inpatient services, neonatal intensive care units, open-heart surgery, cardiac catheterization units, radiation therapy, computed tomographic scanners, and end-stage renal disease.

If the recommendations were accomplished, HEW officials said, the nation would save more than $2 billion annually. HEW pins its hopes for the guidelines on Congress approving a law giving the federal government more teeth over localities in enforcing and mandating standards. The planning law comes before Congress for extension and revision next year.

In addition, "In view of declining birth rates and the mounting under-utilization of obstetrical beds, obstetrical standards for the minimum number of deliveries and occupancy rates are designed to discourage unnecessary duplication and inappropriate proliferation of services, and to maintain quality of care," said HEW.

Pediatric units should maintain average annual occupancy rates related to the number of pediatric beds (exclusive of neonatal intensive care units) in the facility. For a facility with 20-39 pediatric beds, the average annual occupancy rate should be at least 65%; for a facility with 40-79 pediatric beds, the average annual occupancy rate should be at least 75%; for facilities with 80 or more pediatric beds, the average annual occupancy rate should be at least 80%.

In other areas, the HEW recommends that there should be a minimum of 200 procedures performed annually in any institution in which open-heart surgery is performed.

HEW has also recommended that there should be a minimum of 300 procedures (intracardiac and/or coronary artery catheterization) performed annually in any adult cardiac catheterization until plus a minimum of 150 cardiac catheterizations performed annually in any pediatric cardiac catheterization unit.

For computed tomographic scanners, HEW has recommended that the scanner (head and body) should operate at a minimum of 2,500 patient procedures per year. There should be no CT scanners approved unless each existing or approved CT scanner in the service area is performing at a rate greater than 4,000 patient procedures per year.

Texas Medical Foundation president speaks to county societies

A. Rex Kirkley, MD, the new president of the Texas Medical Foundation, is traveling across Texas this fall presenting to county medical societies the history, function, and potentials of the foundations.

"Physicians are realizing more and more that good, high quality medical care is no longer sufficient to meet present day demands," Dr Kirkley says. "An accountability now must be met on a solidified basis."

In his presentation Dr Kirkley provides responses to questions including: Should a third party carry the ultimate decision in medical negotiations?, Does accessible data answer the needs for up-to-date information on medical patterns?, Does business office assistance mean less control for physicians over financial matters?, Is individual, quality care a thing of the past?

County medical societies are encouraged to write or call the Texas Medical Foundation Office, Austin, to schedule a presentation for their meetings.

National Clinical Institute tables Laetrile clinical trials

The National Cancer Institute has tabled consideration of doing a massive clinical trial of Laetrile and instead is studying the possibility of

doing a large-scale retrospective study of Laetrile users, according to the Sept 5 edition of *American Medical News*.

The change in direction was "tentatively decided" at a private meeting in late August between officials of the NCI, the Food and Drug Administration, and the federal Center for Disease Control, said an NCI spokesman.

The meeting, the first official discussion of Laetrile testing by the three agencies, was held to "clear the air" about the question that has sparked heated controversy and raised serious ethical questions in scientific circles and among the general public, the spokesman said.

The NCI, the FDA, and the CDC are looking at the retrospective study approach as a means for possibly justifying future clinical trials of the apricot pit derivative, which thus far has not shown usefulness in any of the traditional animal screening models.

Neurosensory Center opens in Houston

The new Neurosensory Center of Houston located in the Texas Medical Center was dedicated Sept 25 in Houston. The Neurosensory Center is a project of the Baylor College of Medicine and the Methodist Hospital.

Keynote speaker for the dedication was Hon John B. Connally, former governor of Texas and a partner in the law firm of Vinson & Elkins. Connally described the Center as a first for Houston and for the world.

Michael E. Debakey, MD, president of the Baylor College of Medicine, said the Center with its multidisciplinary program in ophthalmology, neurology and otorhinolaryngology and the communicative sciences will make significant contributions toward conquering the more than 200 neurosensory disorders. Among the disorders

The new Neurosensory Center of Houston, located in the Texas Medical Center, is a project of the Baylor College of Medicine and the Methodist Hospital.

which will be treated and studied in the Center are blindness, deafness, muscular dystrophy, stroke, retinal disorders, speech, voice and language disorders, epilepsy, glaucoma, Parkinson's disease, cataracts and multiple sclerosis.

The Center includes three Institutes: The Roy and Lillie Cullen Eye Institute, the Institute of Neurology, and the Institute of Otorhinolaryngology and Communicative Disorders.

The 27 floors in the Neurosensory Center include 160 patient beds, 13 operating rooms, and two 8-bed intensive care units.

UT advisory committees search for two institution presidents

Two advisory committees to the UT System Board of Regents will begin the process of searching for new presidents for two UT health-related institutions in Houston, regents chairman Allan Shivers has announced.

The institutions are The University of Texas Health Science Center at Houston and the University of Texas System Cancer Center including the M.D. Anderson Hospital and Tumor Institute.

The heads of both institutions, Truman G. Blocker, MD, acting president of the Health Science Center, and R. Lee Clark, MD, president of the Cancer Center, have announced plans to retire soon.

The Houston Health Science Center is the largest health-related institution in the UT System. It includes a medical school, dental school, graduate school of biomedical sciences, school of allied health sciences, school of public health, and a speech and hearing institute.

The advisory committee will be charged with submitting the names of at least three candidates for each institution to the Board of Regents.

East Texas Chest Hospital becomes The University of Texas Health Science Center at Tyler

The name of the East Texas Chest Hospital became The University of Texas Health Center at Tyler effective Sept 1.

The name change is the result of the hospital being transferred from the Texas Department of Health to The University of Texas System.

The transfer was authorized during the past legislative session by SB 1300, introduced by Sen Peyton McKnight, Tyler, and sponsored by Reps Bill Clark, Tyler, and Buck Florence, Hughes Springs.

Blue Cross plans get cost curb requirements

A variety of cost containment activities will be mandatory for Blue Cross plans beginning Jan 1, 1978. The 69 member plans voted unanimously to adopt and implement a nine-point cost containment program to be monitored by the BCA.

The new activities include an active program of fraud and abuse investigation, and an internal claims utilization review screening, evaluation, and reporting system regarding the medical necessity and appropriateness of hospital inpatient stays and services rendered.

The mandatory plan also includes education programs stressing prevention of unnecessary and inappropriate use of health care services, and development of a program to meet quantified objectives related to specific indices such as occupancy rates and inpatient costs per subscriber.

Under the new program, a plan must have a monitoring, reporting and evaluation system to measure the plan's progress and the achievement of the objectives, and must provide coordination of benefits to eliminate duplicate payments to subscribers who are covered by more than one health insurance policy.

The plans must have a program to determine if subscribers are eligible for all of the services that have been billed to the plan.

The plans must also have participation in selected external activities, such as health planning agency governing bodies, and exploration of incentive approaches for paying participating hospitals, such as methods of prospective payment.

National commission releases report on epilepsy

There are more than 250,000 persons with epilepsy in the United States whose seizures are inadequately medicated, according to a new report

of the Commission for the Control of Epilepsy and Its Consequences.

Many of them could be seizure free with new medications and the proper delivery of services, the report says.

The study, which is called a Plan for Nationwide Action on Epilepsy, contains more than 400 specific recommendations for action in nine major areas. These include medical services, education and employment, social adjustment and mental health, public patient and professional knowledge and understanding, and the achievement of equality and independence through legal rights.

For further information write the Commission for the Control of Epilepsy and Its Consequences, Federal Building, Room 1C08, 7550 Wisconsin Avenue, Bethesda, Maryland 20014.

Texas Medical Association coordinates Physician's Placement Service

The Texas Medical Association coordinates a Physician's Placement Service for communities seeking physicians, physicians seeking associates, and physicians seeking locations.

Two publications, "Physicians Seeking Locations in Texas" and "Opportunities for Practice in Texas," are prepared and distributed bimonthly.

Physicians seeking locations receive the list of opportunities while communities and physicians receive the list of physicians available for practice.

The service is provided without charge. For information write the Department of Medical Service, Texas Medical Association, 1905 N Lamar Blvd, Austin, 78705.

Coming next month

Scientific articles scheduled for publication in December include surgical treatment of the ischemic limb, primary aldosteronism, a commentary on smoking and health, use of minidose heparin in pelvic surgery, and the noninvasive cardiovascular laboratory.

Investment performance for TMA Members' Retirement Plan and Trust

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1977 Through 9/30	3 Years Ended 12/31/76	5 Years Ended 12/31/76	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	- 4.5%	- 9.3%	- 8.3%	1.7%
Loomis-Sayles Mutual Fund	- 8.2%	- 1.6%	- 4.4%	3.8%
Mercantile Bank Equity Fund	- 6.3%	+ 5.9%	-17.8%	4.1%
Mercantile Bank Fixed Income Fund	- 1.5%	+ 0.2%	- 5.5%	7.2%
T Rowe Price Growth Stock Fund	- 8.8%	- 2.6%	-16.6%	2.2%
T Rowe Price New Income Fund	- 1.0%	+ 2.7%	N/A	7.7%
Stein Roe & Farnham Balanced Fund	- 8.8%	- 0.5%	- 2.7%	3.4%
Standard & Poor 500 Stock Average	-10.2%	+10.4%	+ 5.3%	
Dow Jones Industrial Average	-15.7%	+18.1%	+12.9%	

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

WASHINGTON: SACCHARIN BAN. The US Senate voted an 18-month delay in the Food and Drug Administration's proposed ban on saccharin. The Senate bill requires warnings on possible cancer linkage on products containing saccharin, but printed ads or radio and television commercials would not have to carry such a warning. The Senate bill would impose a moratorium on the FDA ban while additional research is carried out to determine whether human lives would be jeopardized and to weigh the relative risk-benefit ratio of using the artificial sweetener.

NORTH CAROLINA: HEALTH PLANNING LAW. The AMA and the state of North Carolina have lost their suit to strike down the 1974 health planning law as unconstitutional. A three-judge US District Court unanimously ruled Sept 22 that the act does not invade the sovereign rights of the states nor interfere in the private practice of medicine. The AMA and North Carolina will appeal the ruling.

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber, Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

WASHINGTON: SWINE FLU PROGRAM. More than 800 claims have been filed as a result of the A/New Jersey (swine) influenza vaccine campaign conducted last year, the Justice Department said. An attorney for the department said new claims are arriving at a rate of about 20 daily. The vaccine was produced under an agreement stating the government must defend any lawsuit arising from alleged injuries or deaths from the immunization program; the government can then attempt to recover from the vaccine manufacturer or other party if negligence is found.

TEXAS: SUPREME COURT. The Supreme Court of Texas has adopted the "preponderance of the evidence" standard, in cases involving prospective mental patients. TMA Legal Counsel, Brown, Maroney, Rose, Baker, and Barber, filed an amicus brief on behalf of the Texas Medical Association and the American Psychiatric Association, Texas District Branch pointing out that prospective mental patients will not be denied needed treatment in those instances in which the testifying psychiatrist could not satisfy a very difficult burden under the "beyond a reasonable doubt" standard. The ruling came in the case of State of Texas vs. Dan Turner, dealing with the burden of proof to be applied in indefinite commitment proceedings under the Texas Mental Health Code.

WASHINGTON: NATIONAL STANDARDS. The Department of Health Education, and Welfare has published proposed regulations to set up national numerical standards for some specialized health services. These formulae give maximum and minimum supply for nine types of services including general hospital, obstetrics, pediatric in-patient services, neonatal care, open-heart surgery, cardiac catheterization, radiation therapy, and computed tomographic scanning. For general acute-care hospitals, a standard of 4 beds per 1,000 population and 80% occupancy is proposed.

WASHINGTON: MEDICARE-MEDICAID. House and Senate conferees have agreed on provisions of the Medicare-Medicaid anti-fraud and abuse bill which increases penalties and enlarges the role of PSROs. Swift congressional approval is expected.

KANSAS: MEDICAL MALPRACTICE INSURANCE. A Kansas trial court recently upheld a statute which requires physicians to carry malpractice insurance as a condition of practicing medicine in the state.

WASHINGTON: COST CONTAINMENT. Hearings and consideration continued in September in the House on the Administration's proposal to contain hospital costs increases by placing a ceiling on revenue boosts. Several Congressional committees were expected to study cost containment proposals during October.

WASHINGTON: ANTITRUST CASE. The Federal Trade Commission's Antitrust case against the American Medical Association before an FTC administrative law judge in Washington is expected to last five and one-half months. The FTC plans to call 40 witnesses and present 600 exhibits.

"Kid, this stuff is the bananas."

Experts agree: when it comes to good-tasting banana flavor—without the unpleasant taste of paregoric—the makers of Donnagel®-PG really know their stuff!

For diarrhea

Donnagel®-PG Ⓥ

Donnagel with paregoric equivalent

Each 30 cc. contains:	
Kaolin	6.0 g.
Pectin	142.8 mg.
Hyoscyamine sulfate	0.1037 mg.
Atropine sulfate	0.0194 mg.
Hyoscine hydrobromide	0.0065 mg.
Powdered opium, USP (equivalent to paregoric 6 ml.) (warning: may be habit forming)	24.0 mg.
Sodium benzoate (preservative)	60.0 mg.
Alcohol, 5%	

Now with child-proof closure

A·H·ROBINS

A.H. Robins Company
Richmond, Virginia 23220

CLEAR THE TRACT!
Robitussin-DAC
EXPECTORANT
NASAL DECONGESTANT
ANTITUSSIVE
16 FL OZ (1PT.)
THIS PACKAGE INTENDED FOR REPACKAGING BY PHARMACIST
630

A·H·ROBINS

INTRODUCING...

NEW ROBITUSSIN®-DAC

for the difficult cough complicated by nasal congestion

*To help clear the lower respiratory tract—the most recommended single expectorant in the U.S.**

Guaifenesin, NF . . . . . **100 mg**/5 ml

- Enhances output of less viscid secretions to aid in the removal of inspissated mucus.
- Relieves irritated membranes in respiratory passageways by preventing dryness through increased mucus flow.
- Makes dry, unproductive coughs more productive and less frequent.

For cough suppression...the drug of choice†—

Codeine Phosphate, USP . . . . . **10 mg**/5 ml

(Warning: May be habit forming.)

- Reduces severity, frequency and patient awareness of cough.
- Promotes patient comfort.
- Low drug dependence and little risk of side effects in recommended dosage.

For accompanying nasal congestion—

Pseudoephedrine HCl, NF . . . . . **30 mg**/5 ml

- An orally effective nasal/sinus decongestant.
- Relieves congestion, reduces edema, promotes drainage.
- 60 mg pseudoephedrine in a 2-teaspoonful adult dose.

Available in pints only. You prescribe the quantity dispensed.

References:
*National Disease & Therapeutic Index, Jan.-Dec., 1976. IMS America Ltd., Ambler, Pa. 1976.
†Amer. Med. Assn., Dept. of Drugs, A.M.A. Drug Evaluations, 2nd Edition, Publishing Sciences Group, Inc., Acton, Mass., 1973, pp. 482-3.

Robitussin®-DAC—Each 5 ml (1 teaspoonful) contains: Guaifenesin, NF 100 mg; Pseudoephedrine Hydrochloride, NF 30 mg; Codeine Phosphate, USP 10 mg (Warning: May be habit forming) in a palatable, aromatic syrup. Alcohol, 1.4 per cent. INDICATIONS: For the temporary relief of cough and nasal congestion as may occur with the common cold or with inhaled irritants. CONTRAINDICATIONS: Hypersensitivity to any of the ingredients, marked hypertension, hyperthyroidism, or in patients who are receiving MAO inhibitors or antihypertensive medication. WARNINGS: Use this product with caution in children taking another drug. Prescribe cautiously for patients with persistent or chronic cough such as comes with smoking, asthma, emphysema, or where cough is accompanied by excessive secretions. Caution should be taken in administering this drug to patients with high blood pressure, heart disease or diabetes. In patients with chronic pulmonary disease or shortness of breath, this product should be administered with caution. As with all products containing sympathomimetic amines, use with caution in patients with prostatic hypertrophy or glaucoma. Do not exceed recommended dosage because at higher doses nervousness, dizziness or sleeplessness may occur. May cause or aggravate constipation. NOTE: Guaifenesin has been shown to produce a color interference with certain clinical laboratory determinations of 5-hydroxyindoleacetic acid (5-HIAA) and vanillylmandelic acid (VMA). ADVERSE REACTIONS: Agitation, dizziness, insomnia, palpitations or nausea may occur, In such instances, reduction in frequency and/or quantity of dose is indicated. RECOMMENDED DOSAGE: Adults—1 or 2 teaspoonfuls every four hours, not to exceed 12 teaspoonfuls in a 24 hour period; children 6 to under 12 years: 1 teaspoonful every four hours, not to exceed 6 teaspoonfuls in a 24-hour period; children 2 to under 6 years: 1/2 teaspoonful every four hours, not to exceed 3 teaspoonfuls in a 24-hour period; children under 2 years: use as directed by a physician. ALSO AVAILABLE: Robitussin®. Robitussin-CF®. Robitussin A-C®—Robitussin with codeine. Robitussin-DM® Robitussin with dextromethorphan. Robitussin-DM in solid form). Cough Calmers® lozenges with phenylpropanolamine and dextromethorphan. Robitussin-PE®—Robitussin with pseudoephedrine. (Robitussin-DM and Robitussin-PE are not available in Canada.) A. H. Robins Co., Richmond, Va. 23220.

FREE OFFER—For a 1978 calendar featuring a poster-size, full-color reproduction of this photo of Southern Railway Engine No. 630, write **"Robitussin-DAC"** on your Rx pad and mail to "Train Offer," A. H. Robins Company, 1407 Sherwood Avenue, Richmond, VA 23220.

consider the effect on coexisting diabetes when you prescribe a vasodilator*

(POSTERIOR VIEW OF PANCREAS)

no interference in the management of the diabetic patient has been reported with

VASODILAN®
(ISOXSUPRINE HCl)

the compatible vasodilator TABLETS, 20 mg.

***Indications:** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily.

Intramuscular: 5 to 10 mg.(1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

Mead Johnson LABORATORIES

© 1977, MEAD JOHNSON & COMPANY, EVANSVILLE, INDIANA 47721 U.S.A. MJL5-4117R1

MEDICAL MANAGEMENT CONSULTANTS

Providing the following services to the health care field:

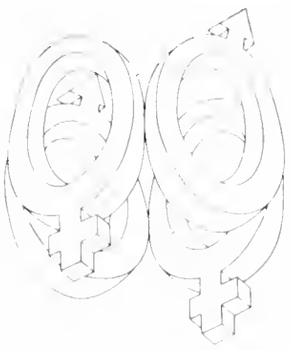
1. Medical practice business management:
   a) Start-ups
   b) Ongoing
   c) Consulting
2. Leasing-Auto's and equipment (physicians only)
3. Investment and insurance counseling
4. Pension and profit sharing, consulting

PROFESSIONAL SYSTEMS & SERVICES, INC.

800 8th Avenue, Suite 404
Fort Worth, Texas 76104
817 335-7503

1701 Cedar Springs
Dallas, Texas 75202
214 742-2358

The Best Part Happens After It's Over!

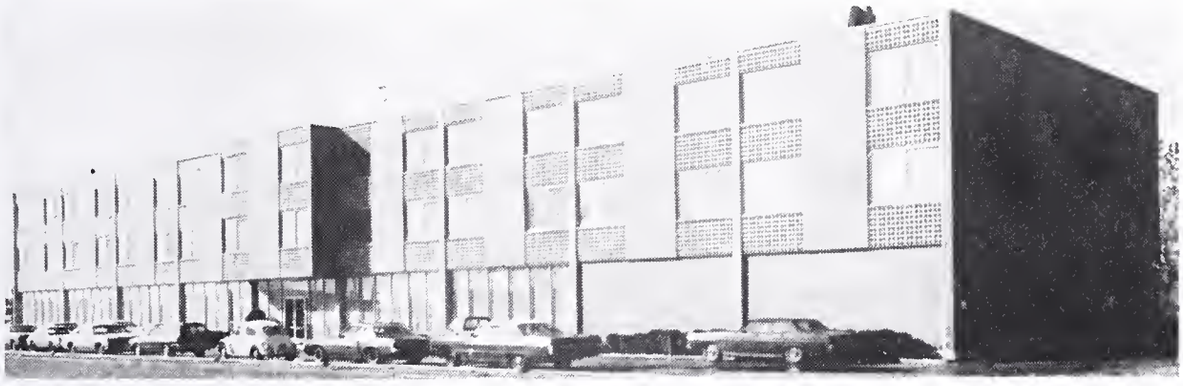


expanding awareness
You are Your Sexuality

A weekend seminar at the Whitehall Hotel Nov. 5-6 & Nov. 12-13. In Houston. Call 713-683-7169 for a brochure or more information.

Build Something You'll Never Outgrow...YOU!

Arlington Neuropsychiatric Center



A PRIVATE PSYCHIATRIC HOSPITAL ADULT UNIT ADOLESCENT UNIT

COMPLETE ACCREDITED FACILITIES, SERVICES AND PROGRAMS, INCLUDING SCHOOL, FOR THE CARE AND TREATMENT OF BOTH ADULT AND ADOLESCENT PATIENTS.

PSYCHIATRY
RICHARD J. CANCEMI, M.D.
ARMANDO DESALOMS, M.D.
ROBERT C. KNIPSTEIN, M.D.
SUE L. NICKEY, M.D.
CARL E. RENFRO, M.D.
MURRAY C. SKAGGS, M.D.
THOMAS C. TIPS, M.D.

PSYCHOLOGY
ANN TUCKER, Ph.D.

SOCIAL WORK
WILLIAM PORTWOOD, MSW

ACTIVITIES THERAPY
GAIL LANE, OTR

ADMINISTRATOR
JAMES H. BINGHAM, JR.

BLUE CROSS AND CHAMPUS APPROVED **MEDICARE CERTIFIED**

701 WEST RANDOL MILL ROAD, ARLINGTON, TEXAS 76012

ADMISSIONS ACCEPTED ON 24-HOUR BASIS (817) 261-3121

Flexibility is our forte: The Brown Schools

Beeause we maintain great flexibility at all three of our treatment centers, each resident follows an individualized plan of treatment, training, education and care preseribed for that resident alone.

And we believe that residential treatment conducted in this highly individualized manner still is the most effective treatment for many. Our large, experieneed staff is skilled in the treatment of ehildren, adoleseents and adults with learning disabilities, neurologieal impairment, mental retardation or emotional disturbance.

Our three treatment centers are geographieally separated to provide the appropriate residential milieu, yet elose enough that residents benefit from the comprehensive training and expertise of the entire staff. All three are psyehiatrieally oriented, so that we are prepared to treat emotional disturbance in persons of any intelleetual eapaeity and of any age.

For information, write: Direetor of Admissions / Department K-1
THE BROWN SCHOOLS / P.O. Box 4008, Austin, Texas 78765
From Texas Free: (800) 292-5404

All our programs are accredited by the appropriate councils of the Joint Commission on Accreditation of Hospitals.

THE BROWN SCHOOLS
An equal opportunity employer.

MEETINGS

SOUTHERN MEDICAL ASSOCIATION

The Southern Medical Association will meet in the Dallas Convention Center, Nov 6-9, 1977. The program includes sixteen postgraduate courses which are acceptable for hour-for-hour Category 1 credit toward the Physician's Recognition Award of the American Medical Association. The courses also are approved for Elective hours by the American Academy of Family Physicians. Medical students, interns, and residents will receive a 50% discount on all postgraduate courses sponsored by the SMA.

Contact: 2601 Highland Ave, Birmingham, Ala 35205.

TEXAS DISTRICT BRANCH, AMERICAN PSYCHIATRIC ASSOCIATION

The Sheraton-Marina Inn in Corpus Christi, Tex, is the site of the Texas District Branch, American Psychiatric Association scientific program. The program will be presented Saturday, Nov 12, 1977. The first session begins at 9 am, and includes presentations on: The Medical Model in Psychiatry, The Role of the Psychiatrist in the Community Mental Health Center, and The Training of the Psychiatrist. The theme of the afternoon session is Women's Issues in Psychiatry. Women as Patients, Contemporary Psychoanalytic Concepts of Women, and Women as Psychiatrists are the topics to be explored during this portion of the program.

Contact: Iris Wenzel, 1905 N Lamar Blvd, Austin, Tex 78705.

TEXAS MEDICAL ASSOCIATION

Texas Medical Association's House of Delegates will meet Nov 12-13, 1977, in Austin. The session begins at 8 am Saturday, Nov 12, at the Austin Hilton Inn. Reference committee hearings begin at 9 am. A special reference committee will convene at 10 am to consider the report of the Executive Board's Ad Hoc Committee to Study the Association's Organizational Structure and Function. The House will act on reference committee reports during its second session, beginning at 8 am, Sunday, Nov 13. Reference Committee hearings are open to all members of the Association.

Contact: C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex.

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF PEDIATRICS, Annual Meeting, New York Hilton, New York City, Nov 5-10, 1977. Reports on latest in pediatric practice, research. Special seminars review allergy, problems of newborns, genetics, behavior problems, child development, sports medicine, neonatology. General sessions, open to all registrants, begin Monday morning with discussion of immunization and bacterial vaccines. Other general sessions include panel discussion on food additives and hyperkinesis, problems of high risk neonate, prevention of obesity in infancy, effects of oral contraceptives on adolescents. Contact: Robert G Frazier, MD, Exec Officer, 1801 Hinman Ave, Evanston, Ill 60201.

AMERICAN MEDICAL WOMEN'S ASSOCIATION, 62nd Annual Meeting, Marriott Hotel, Denver, Nov 30-Dec 4, 1977. Scientific program: Emergency Care—Crisis or Control? Approved for 10 hours, Category 1, AMA Physician's Recognition Award; AAFP Prescribed. Basic Life Support Couse, Cardiac Resuscitation, approved for 4 hours, Category 1, AMA Physician's Recognition Award. Those who complete Basic Life Support Course also receive certificate from American Heart Association. Audio-visual teaching equipment, book exhibit on emergency care, house of delegates meetings, welcome reception, breakfasts, luncheons, awards, reception, inaugural banquet, entertainment. Tours of Heritage Square, Denver, Air Force Academy. Contact: 1740 Broadway, New York 10019.

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES, 84th Annual Meeting, Shoreham-Americana Hotel, Washington, DC, Nov 27-Dec 1, 1977. Theme: Federal Health Services in the Next Decade. Outstanding scientific program, major social events. Distinguished international medical leaders, commanders and directors of 384 major hospitals in Federal Medical System. Exhibits emphasize pharmaceuticals, diagnostic, laboratory, x-ray, therapeutic equipment and systems, hospital operational and management equipment and services, furniture, ambulances and casualty handling equipment, publications and books, general medical supplies.

For other courses and symposia, see Continuing Education Courses, pp 42-44.

NOVEMBER

AMERICAN ACADEMY OF PEDIATRICS, New York, Nov 5-10, 1977. Robert G Frazier, MD, Exec Officer, 1801 Hinman Ave, Evanston, Ill 60201.

AMERICAN ASSOCIATION OF BLOOD BANKS, Atlanta, Nov 11-16, 1977. Lois J James, Asstnt Exec Dir, 1828 L St, NW, Washington, DC 20036.

SOCIETY FOR COMPUTER MEDICINE, Las Vegas, Nev, Nov 9-11, 1977. MA Jenkin, MD, 5100 Edina Industrial Blvd, Suite 231F, Edina, Minn 55435.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, New Orleans, Nov 9-13, 1977. Howard Silber, Exec Officer, Box 912, Omaha 68101.

AMERICAN CANCER SOCIETY, INC, New York, Nov 9-11, 1977. Lane W Adams, Exec Vice-pres, 777 Third Ave, New York 10017.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, San Francisco, Nov 8-10, 1977. Arthur Auer, Exec Officer, 3900 Capital City Blvd, Lansing, Mich 48906.

AMERICAN HEART ASSOCIATION, Miami, Nov 28-Dec 2, 1977. William W Moore, Exec Officer, 7320 Greenville Ave, Dallas 75231.

AMERICAN MEDICAL ASSOCIATION, 16th Natl Conference on Physicians and Schools, Chicago, Nov 10-11, 1977. Division of Scientific Activities/Department of Health Education, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL WOMEN'S ASSOCIATION, Denver, Nov 30-Dec 4, 1977. Lorraine Loesel, Exec Officer, 1740 Broadway, New York 10019.

AMERICAN SOCIETY OF CYTOLOGY, Toronto, Nov 1-5, 1977. Warren R Lang, MD, Sec-Treas, Health Sciences Center, 130 S Ninth St, Suite 10006, Philadelphia 19107.

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES, Washington, DC, Nov 27-Dec 1, 1977. 10605 Concord St, Suite 306, Kensington, Md 20795.

INTERNATIONAL COLLEGE OF SURGEONS, New Orleans, Nov 18-23, 1977. 1516 N Lake Shore Dr, Chicago 60610.

■ SOUTHERN MEDICAL ASSOCIATION, Dallas, Nov 6-9, 1977. 2601 Highland Ave, Birmingham, Ala 35205.

■ **SOUTHERN MEDICAL ASSOCIATION, Section on Ophthalmology, Dallas, Nov 6-9, 1977. William H Coles, MD, Section Sec, Dept of Ophthalmology, 80 Barre St, Charleston, SC 29401.**

■ TEXAS DISTRICT BRANCH, AMERICAN PSYCHIATRIC ASSOCIATION, Corpus Christi, Tex, Nov 12, 1977. Iris Wenzel, 1905 N Lamar Blvd, Austin, Tex 78705.

■ **TEXAS MEDICAL ASSOCIATION, House of Delegates, Austin, Tex, Nov 12-13, 1977. C Lincoln Williston, Exec Dir, 1801 N Lamar Bvd, Austin, Tex 78701.**

DECEMBER

■ AMERICAN ACADEMY OF DERMATOLOGY, Dallas, Dec 3-8, 1977. Bradford W Claxton, Exec Dir, 820 Davis St, Evanston, Ill 60201.

AMERICAN ASSOCIATION OF GYNECOLOGICAL LAPAROSCOPISTS, San Francisco, Dec 7-11, 1977. Jordan M Phillips, Exec Officer, 11239 S Lakewood Blvd, Downey, Calif 90241.

■ AMERICAN COLLEGE OF CHEMOSURGERY, Dallas, December 1977. GR Mikhail, MD, Sec-Treas, 2 Elmsleigh Lane, Grosse Pointe, Mich 48230.

■ AMERICAN COLLEGE OF PHYSICIANS, Texas (Northern) Regional Meeting, Dallas, Dec 1-3, 1977. Albert D Roberts, Jr, MD, FACP, UT Health Science Center, 5323 Harry Hines Blvd, Dallas 75235.

AMERICAN MEDICAL ASSOCIATION, Chicago, Dec 4-7, 1977. 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, 31st Winter Scientific Meeting, Miami, Dec 10-13, 1977, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL TENNIS ASSOCIATION, Palm Springs, Calif, Dec 7-11, 1977. WJ Drake, Exec Dir, Box 183, Alton, Ill 62002.

SOUTHERN SURGICAL ASSOCIATION, Hot Springs, Va, Dec 5-7, 1977. WR Warren, MD, Sec, Emory University Hospital, Atlanta 30322.

■ SOUTHWESTERN GYNECOLOGIC ASSEMBLY, Dallas, Dec 1-3, 1977. 3630 Noble Ave, Dallas 75204.

JANUARY

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Bal Harbour, Fla, Jan 28-Feb 3, 1978. Ms M Trueblood, Sec, 6 N Michigan Ave, Chicago 60602.

SOCIETY OF THORACIC SURGEONS, Orlando, Fla, Jan 23-25, 1978. 111 E Wacker Dr, Chicago, 60601.

SOUTHERN CLINICAL NEUROLOGICAL SOCIETY, San Juan, PR, Jan 16-20, 1978. BL Bercaw, MD, Sec-Treas, 1011 Jeffords St, Clearwater, Fla 33516.

■ **TEXAS MEDICAL ASSOCIATION, Winter Conference, Austin, Tex, Jan 20-22, 1978. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.**

■ TEXAS SOCIETY OF PATHOLOGISTS, Austin, Tex, Jan 27-29, 1978. Iris Wenzel, 1905 N Lamar Blvd, Austin, Tex 78705.

■ UNITED CEREBRAL PALSY ASSOCIATION OF TEXAS, INC, Austin, Tex, Jan 14-15, 1978. San Jacinto Bldg, Suite 201, Ninth and San Jacinto, Austin, Tex 78701.

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, Phoenix, Ariz, Feb 25-Mar 1, 1978. Raymond G Slavin, MD, Exec Off, 1402 S Grand, St Louis 63104.

■ AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Dallas, Feb 23-28, 1978. Charles V Heck, MD, Exec Dir, 430 N Michigan Ave, Chicago 60611.

AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS, Key Largo, Fla, Feb 22-26, 1978. RA Straffon, MD, Sec-Treas, 2020 E 93rd St, Cleveland 44106.

AMERICAN COLLEGE OF PSYCHIATRISTS, New Orleans, Feb 8-12, 1978. JC Nemiah, MD, Admn Officer, Beth Israel Hospital, 330 Brookline Ave, Boston 02215.

■ AMERICAN COLLEGE OF SURGEONS, SOUTH TEXAS CHAPTER, Houston, Feb 2-4, 1978. Peter B Fisher, MD, Pres, 615 Medical Towers Bldg, Houston 77025.

AMERICAN GROUP PSYCHOTHERAPY ASSOCIATION, New Orleans, Feb 21-25, 1978. Ms MS Block, Exec Sec, 1995 Broadway, 14th Fl, New York 10023.

■ AMERICAN ORTHOPAEDIC FOOT SOCIETY, Dallas, Feb 22-23, 1978. RA Mann, MD, Sec, 3334 Webster St, Oakland, Calif 94609.

■ AMERICAN SOCIETY FOR SURGERY OF THE HAND, Dallas, Feb 19-24, 1978. RJ Smith, MD, Sec, Dept of Orthopaedics, Massachusetts General Hospital, Fruit St, Boston 02114.

ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL INSTRUMENTATION, Chicago, Feb 25-Mar 1, 1978. MJ Miller, JD, Exec Dir, 1901 N Ft Myer Dr, Suite 602, Arlington, Va 22209.

ASSOCIATION OF CONVALESCENT HOMES AND HOSPITALS FOR ASTHMATIC CHILDREN, Phoenix, Ariz, Feb 23-24, 1978. I Friedman, Exec Vice-pres, Spring Valley Rd, Ossining, NY 10562.

■ DISTRICT I MEDICAL SOCIETY, TEXAS MEDICAL ASSOCIATION, El Paso, Tex, Feb 11, 1978. Laurance N Nickey, MD, 1515 N Oregon St, El Paso, Tex 79902.

FEDERATION OF WESTERN SOCIETIES OF NEUROLOGICAL SCIENCES, INC, San Francisco, Feb 23-26, 1978. Leon G Kaseff, MD, Prog Chmn, 1783 El Camino Real, Burlingame, Calif 94010.

SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, Jackson, Miss, Feb 21-24, 1978. Marti Ginest, Exec Sec, 4300 N Lamar Blvd, Austin, Tex 78756.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, ALAMO CHAPTER, San Antonio, Tex, Feb 17-19, 1978. Raymond Hernandez, Jr, MD, Gen Chmn, 2200 McCullough Ave, San Antonio, Tex 78212.

WESTERN MEDICAL SOCIETY FOR THE STUDY OF TRAUMA, Steamboat Springs, Colo, Feb 18-25, 1978. AA Torre, MD, Sec-Treas, 3797 E Shields, Fresno, Calif 93728.

MARCH

AMERICAN COLLEGE OF CARDIOLOGY, Anaheim, Calif, Mar 6-9, 1978. William D Nelligan, CAE, Exec Officer, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS, Atlanta, Mar 29-31, 1978. 1718 Gallagher Rd, Norristown, Pa 19401.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, New Orleans, Mar 19-23, 1978. Lois Neary, Exec Officer, 1430 Tulane Ave, New Orleans 70112.

AMERICAN FERTILITY SOCIETY, New Orleans, Mar 29-Apr 1, 1978. HH Thomas, MD, Medical Dir, 1608 13th Ave S, Suite 101, Birmingham, Ala 35205.

AMERICAN PSYCHOSOMATIC SOCIETY, Washington, DC, Mar 30-Apr 1, 1978. MA Hofer, MD, Sec-Treas, 265 Nassau Rd, Roosevelt, NY 11575.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, Las Vegas, Nev, Mar 10-15, 1978. BF Alfano, MD, Exec Sec, 675 Main St, Melrose, Mass 02176.

AMERICAN SOCIETY OF REGIONAL ANESTHESIA, San Francisco, Mar 18-19, 1978. H Carron, Sec-Treas, Box 11083, Richmond, Va 23230.

ASSOCIATION FOR HOSPITAL MEDICAL EDUCATION, Atlanta, Mar 22-26, 1978. Ms GM Coleman, Admn Dir, 1911 Jefferson Davis Hwy, Suite 905, Arlington, Va 22202.

CALIFORNIA MEDICAL ASSOCIATION, San Francisco, Mar 17-22, 1978. WW Babb, Exec Dir, 731 Market St, San Francisco 94103.

INTERNATIONAL ACADEMY OF PATHOLOGY, INC, Atlanta, Mar 6-10, 1978. Leland D Stoddard, MD, Sec-Treas, Department of Pathology, Medical College of Georgia, Augusta, Ga 30902.

INTERNATIONAL ENDORADIOTHERAPY SYMPOSIUM, Los Angeles, Mar 10-12, 1978. JA Lipsett, MD, Department of Radiology, Los Angeles County-University of Southern California Medical Center, 1200 N State St, Los Angeles 90033.

INTRAOCULAR LENS SYMPOSIUM, Los Angeles, Mar 14-18, 1978. KJ Hoffer, MD, Chmn, American Intraocular Implant Society, Box 3140, Santa Monica, Calif 90403.

APRIL

AMERICAN CLEFT PALATE ASSOCIATION, Atlanta, Apr 5-8, 1978. Mrs Flora P Berk, Admn Sec. 331 Salk Hall, University of Pittsburgh, Pittsburgh 15261.

AMERICAN COLLEGE OF ALLERGISTS, Las Vegas, Nev, Apr 1-6, 1978. 2141 14th St, Boulder, Colo 80302.

AMERICAN GERIATRICS SOCIETY, INC, Atlanta, Apr 13-14, 1978. Mrs Kathryn S Henderson, Exec Dir, 10 Columbus Circle, New York 10019.

AMERICAN COLLEGE OF PHYSICIANS, Boston, Apr 17-20, 1978. RH Moser, MD, Exec Vice-pres, 4200 Pine St, Philadelphia 19104.

AMERICAN COLLEGE OF RADIOLOGY, San Diego, Apr 9-14, 1978. WC Stronach, Exec Dir, 20 N Wacker Dr, Chicago 60606.

AMERICAN LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL SOCIETY, Palm Beach, Fla, Apr 25-27, 1978. RL Ruggles, MD, Exec Sec, c/o Ann Holm, 2954 Dorman Rd, Broomall, Pa 19008.

AMERICAN PHYSIOLOGICAL SOCIETY, Atlantic City, NJ, Apr 9-14, 1978. OE Reynolds, PhD, Exec Sec-Treas, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN MEDICAL SOCIETY ON ALCOHOLISM, St Louis, Apr 27-May 3, 1978. JG Chen See, MD, Sec, 733 Third Ave, New York 10017.

ILLINOIS STATE MEDICAL SOCIETY, Chicago, Apr 1-5, 1978. RN White, Exec Admn, 55 E Monroe St, Suite 3510, Chicago 60603.

MEDICAL ASSOCIATION OF GEORGIA, Jekyll Island, Ca, Apr 21-23, 1978. JM Moffett, Exec Dir, 938 Peachtree St NE, Atlanta 30309.

NEBRASKA MEDICAL ASSOCIATION, Lincoln, Neb, Apr 30-May 3, 1978. KE Neff, Exec Sec, 1901 First National Bank, Lincoln, Neb 68508.

PAN-PACIFIC SURGICAL ASSOCIATION, Honolulu, Apr 1-7, 1978. Cesar B deJesus, MD, Sec, Public Relations, Room 237, Alexander Young Bldg, Honolulu 96813.

■ SOCIETY FOR BIOMATERIALS, San Antonio, Tex, Apr 29-May 2, 1978. C William Hall, MD, Program Committee Co-Chmn, 8500 Culebra Rd, San Antonio, Tex 78284.

STATE MEDICAL SOCIETY OF WISCONSIN, Milwaukee, Apr 13-15, 1978. ER Thayer, Sec and Gen Mgr, 330 E Lakeside, Madison, Wis 53701.

TENNESSEE MEDICAL ASSOCIATION, Knoxville, Tenn, Apr 12-15, 1978. LH Williams, Exec Dir, 112 Louise Ave, Nashville, Tenn 37203.

41st Annual New Orleans Graduate Medical Assembly

March 31-April 4, 1978

Meeting Theme:

"The High Risk Patient"

Accreditation: AMA-Category I
AAFP, ACEP
Adolph A. Flores, Jr., M.D., President
Oliver H. Dabezies, Jr., M.D., F.A.C.S., Director of Program

Fees: Non-Member Physicians - $200
Military - $100
Registered Nurses - $100
Students, Residents, Interns & Fellows - Complimentary

Write or Phone: New Orleans Graduate Medical Assembly
Tulane Medical Center, Room 1538
1430 Tulane Avenue
New Orleans, Louisiana 70112
(504) 525-9930

U.S. POSTAL SERVICE

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

(Required by 39 U.S.C. 3685)

1. TITLE OF PUBLICATION: TEXAS MEDICINE	2. DATE OF FILING: 9-20-77
3. FREQUENCY OF ISSUE: Monthly	A. NO. OF ISSUES PUBLISHED ANNUALLY: 12 / B. ANNUAL SUBSCRIPTION PRICE: $8.00
4. LOCATION OF KNOWN OFFICE OF PUBLICATION *(Street, City, County, State and ZIP Code) (Not printers)*: 1801 N. Lamar, Austin, Texas 78701	
5. LOCATION OF THE HEADQUARTERS OR GENERAL BUSINESS OFFICES OF THE PUBLISHERS *(Not printers)*: 1801 N. Lamar, Austin, Texas 78701	
6. NAMES AND COMPLETE ADDRESSES OF PUBLISHER, EDITOR, AND MANAGING EDITOR	
PUBLISHER *(Name and Address)*: Texas Medical Association, 1801 N. Lamar, Austin, Texas 78701	
EDITOR *(Name and Address)*: None	
MANAGING EDITOR *(Name and Address)*: Mrs. Marilyn Baker, 1801 N. Lamar, Austin, Tx 78701	

7. OWNER *(If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stock holders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given.)*

NAME	ADDRESS
Texas Medical Association	1801 N. Lamar, Austin, Tx 78701

8. KNOWN BONDHOLDERS, MORTGAGEES, AND OTHER SECURITY HOLDERS OWNING OR HOLDING 1 PERCENT OR MORE OF TOTAL AMOUNT OF BONDS, MORTGAGES OR OTHER SECURITIES *(If there are none, so state)*

NAME	ADDRESS
None	

9. FOR COMPLETION BY NONPROFIT ORGANIZATIONS AUTHORIZED TO MAIL AT SPECIAL RATES *(Section 132.122, PSM)*
The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes *(Check one)*:

[X] HAVE NOT CHANGED DURING PRECEDING 12 MONTHS [ ] HAVE CHANGED DURING PRECEDING 12 MONTHS *(If changed, publisher must submit explanation of change with this statement.)*

10. EXTENT AND NATURE OF CIRCULATION	AVERAGE NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS	ACTUAL NO. COPIES OF SINGLE ISSUE PUBLISHED NEAREST TO FILING DATE
A. TOTAL NO. COPIES PRINTED *(Net Press Run)*	14,319	14,634
B. PAID CIRCULATION 1. SALES THROUGH DEALERS AND CARRIERS, STREET VENDORS AND COUNTER SALES	-------	------
2. MAIL SUBSCRIPTIONS	13,783	14,146
C. TOTAL PAID CIRCULATION *(Sum of 10B1 and 10B2)*	13,783	14,146
D. FREE DISTRIBUTION BY MAIL, CARRIER OR OTHER MEANS SAMPLES, COMPLIMENTARY, AND OTHER FREE COPIES	436	411
E. TOTAL DISTRIBUTION *(Sum of C and D)*	14,219	14,557
F. COPIES NOT DISTRIBUTED 1. OFFICE USE, LEFT OVER, UNACCOUNTED, SPOILED AFTER PRINTING	100	77
2. RETURNS FROM NEWS AGENTS	-----	------
G. TOTAL *(Sum of E, F1 and 2—should equal net press run shown in A)*	14,319	14,634

11. I certify that the statements made by me above are correct and complete.

SIGNATURE AND TITLE OF EDITOR, PUBLISHER, BUSINESS MANAGER, OR OWNER: Marilyn M. Baker, Executive Editor

12. FOR COMPLETION BY PUBLISHERS MAILING AT THE REGULAR RATES *(Section 132.121, Postal Service Manual)*

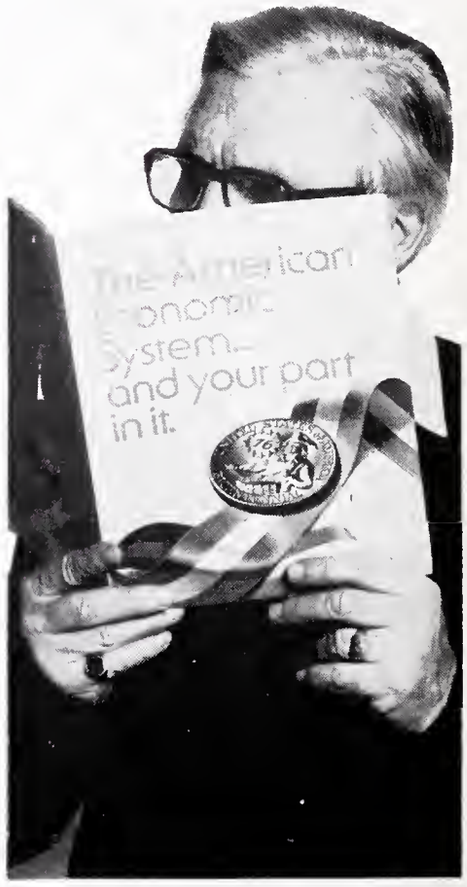
39 U.S.C. 3626 provides in pertinent part: . . . No person who would have been entitled to mail matter under former section 4359 of this title shall mail such matter at the rates provided under this subsection unless he files annually with the Postal Service a written request for permission to mail matter at such rates.

In accordance with the provisions of this statute, I hereby request permission to mail the publication named in Item 1 at the phased postage rates presently authorized by 39 U.S.C. 3626.

SIGNATURE AND TITLE OF EDITOR, PUBLISHER, BUSINESS MANAGER, OR OWNER: Marilyn M. Baker, Executive Editor

How much change does our American Economic System need: A lot? A little? None?

The more we all know about our system and how it works, the better we can decide what to preserve, what to change in the years ahead. That's why this special booklet has been prepared. Every American ought to know what it says. For a free copy, write: "Booklets," P.O. Box 1887, New York, N.Y. 10001.



A public service of The Advertising Council & U.S. Department of Commerce presented by this Magazine

Ad Council

Why pay in advance for malpractice claims that may never happen? You don't have to, you know!

Pay in advance? That's exactly what you do under the terms of an ordinary "occurrence" type policy, because most insurance companies charge you for future claims that they estimate will be made.

And once you've paid those premiums, the money is gone forever.

API offers you a logical alternative – an innovative professional liability policy that doesn't load the current premium for future claims – but provides for that coverage when it is needed.

API delivers savings to you because the company is owned by you, the physicians it insures. Underwriting and investment profits accrue to the benefit of the policyholders – not to stockholders. Obviously, other companies aren't going to admit to the logic of API's policy, but we can demonstrate the superiority of the concept.

Find out for yourself how your colleagues in API are saving the money they used to lose. Fill out and mail the coupon below and we'll contact you promptly with a full explanation of how you can benefit.

AMERICAN PHYSICIANS INSURANCE EXCHANGE
YOUR PROFESSIONAL SECURITY IS OUR POLICY

1400 FRITO-LAY TOWER • DALLAS, TEXAS 75235 • PHONE: (214) 350-6661

YOUR NAME

SPECIALTY

ADDRESS | CITY | ZIP

( )

PHONE | POLICY RENEWAL DATE

How does your professional liability company compare with API?

YOUR COMPANY

1. **WHO OWNS THE COMPANY AND BENEFITS FROM THE PROFITS?**

   API . . .
   . . . belongs to the Physicians it insures, and all profits and investment income accrues to their benefit.

2. **WHAT LIMITS OF LIABILITY ARE AVAILABLE DIRECTLY FROM THE COMPANY?**

   API . . .
   . . . has up to $100,000 each claim; $300,000 aggregate any one year.

3. **WHAT IS THE COMPANY'S CAPITAL AND/OR SURPLUS, AND IS IT GROWING? (NOT ITS TOTAL ASSETS WHICH MUST BE REDUCED BY ITS LIABILITIES TO ARRIVE AT SURPLUS).**

   API's . . .
   . . . surplus is $1,100,000 and growing at the rate of approximately $60,000 per month.

4. **IS THE COMPANY REALLY REINSURED FOR YOUR PROTECTION, OR IS ITS REINSURANCE A VERY LIMITED "RETRO-PLAN" USED PRIMARILY FOR ADVERTISING PURPOSES — GIVING THE COMPANY VIRTUALLY NO REINSURANCE PROTECTION?**

   API's . . .
   . . . reinsurance provides full limits of $75,000 excess of $25,000 each claim occurrence with no limit as to the number of claims the reinsurer is liable for.

5. **WHO DOES THE LEGAL STAFF REALLY REPRESENT — YOU OR THE COMPANY?**

   API's . . .
   . . . legal staff is under the direction of the Physician Board Members elected by the Policy-holders. They work with the Peer Claims Committee in behalf of the insured Physicians. API cannot settle a case without the insured Physicians approval.

6. **HOW ARE NEW PHYSICIANS SELECTED FOR COVERAGE?**

   API . . .
   . . . by their Peers who comprise the confidential Peer Review Committees throughout the State.

7. **DOES THE COMPANY SPECIALIZE EXCLUSIVELY IN MEDICAL PROFESSIONAL LIABILITY AND RELATED COVERAGE; ALSO, DOES THE COMPANY OPERATE IN TEXAS ONLY, OR DOES IT EXPOSE ITSELF TO PHYSICIANS AND PROFESSIONS IN OTHER STATES?**

   API . . .
   . . . was organized solely for the purpose of writing medical professional liability and related insurance for Texas Physicians. No insurance is written outside of Texas.

8. **HAS THE COMPANY DEDICATED ITS TOTAL RESOURCES TO PROVIDE PROFESSIONAL LIABILITY INSURANCE TO TEXAS PHYSICIANS — COME WHAT MAY — OR IS IT ONLY IN IT FOR PROFIT, AND LIKELY TO PULL OUT IF TIMES AGAIN GET DIFFICULT?**

   API . . .
   . . . is equipped to do whatever is necessary to maintain the most stable Professional Liability market in Texas for its Subscribers.

9. **WHAT IS THE HISTORY OF RATES? HAVE THEY BEEN INCREASING OR DECREASING?**

   API . . .
   . . . had a statewide average 15% premium decrease after only 12 months of operation.

PLACE STAMP HERE

AMERICAN PHYSICIANS INSURANCE EXCHANGE
1400 FRITO-LAY TOWER ■ DALLAS, TEXAS 75235

A character all its own.

Valium (diazepam) is a benzodiazepine with a character all its own. Pharmacologically, it has been described as more potent mg-per-mg than other available anxiolytic benzodiazepines. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states, somatic complaints which are concomitants of emotional factors, psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

CONTINUING EDUCATION COURSES

NOVEMBER

Anesthesiology

Title: Anesthesia in Emergency Surgery
Sponsors: UT Health Science Center at Dallas; A. Webb Roberts Center for Continuing Education, Dallas
Location of Course: UT Health Science Center at Dallas
Date: Nov 4, 1977
Duration: 1 day
Designed For: General practitioners; Specialists in Anesthesiology, Surgery
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, patient demonstration, seminar
Contact: June Bovill, Assistant to Associate Dean for Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Title: Anesthesia and Surgery of the Aorta and Great Vessels
Sponsor: Department of Anesthesiology, Baylor College of Medicine
Location of Course: Marriott Motor Hotel, Houston
Dates: Nov 10-11, 1977
Contact: Dean H. Morrow, MD, Professor of Anesthesiology, Baylor College of Medicine, Texas Medical Center, Houston 77030

Arthritis & Rheumatism

Title: Current Concepts in Arthritis
Sponsors: North Texas Chapter, Arthritis Foundation; Rheumatic Diseases Unit, Department of Internal Medicine, UT Health Science Center at Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: Citizens General Hospital, Greenville, Tex
Date: Nov 17, 1977
Fee: $10, includes lunch
Credit: 6 hours, AMA Physician's Recognition Award
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Basic Sciences: Microbiology & Immunology

Title: A Review of Clinical Microbiology
Sponsors: Department of Pathology, Baylor University Medical Center, Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: Ramada Inn, Dallas
Dates: Nov 7-11, 1977
Fee: $175
Credit: 39 hours, AMA Physician's Recognition Award
Contact: Carolyn Saunders, A. Webb Roberts Center for Continuing Education, 3500 Gaston Ave, Dallas 75246

Title: Fourth Annual Texas Medical Center Symposium on Infectious Disease and Microbiology: What's New with Antibiotics
Sponsors: UT Health Science Center at Houston; Baylor College of Medicine; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute, Houston; Houston Association of Medical Microbiologists
Location of Course: Texas Medical Center, Houston
Date: Nov 19, 1977
Contact: UT Health Science Center at Houston, Box 20367, Houston 77025

Hematology

Title: Symposium on Hemostasis
Sponsors: South Texas Comprehensive Hemophilia Center, UT Health Science Center at San Antonio
Location of Course: UT Health Science Center Auditorium, San Antonio
Dates: Nov 11-13, 1977
Fee: None
Credit: 8 hours, Category 1, AMA Physician's Recognition Award
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Malignant Disease

Title: Immunotherapy of Human Cancer
Sponsors: UT Health Science Center at Houston; M.D. Anderson Hospital and Tumor Institute, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Nov 10-11, 1977
Duration: Continuous; 8 am-5 pm; 11 total course hours
Fee: $45
Designed For: General practitioners; Specialists
Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, lecture, open question, panel
Contact: George R. Blumenschein, MD, Associate Director of Education, M.D. Anderson Hospital and Tumor Institute, Texas Medical Center, Houston 77030 or Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77030

Title: Pathology Review—Immunotherapy of Human Cancer
Sponsors: UT Health Science Center at Houston; M.D. Anderson Hospital and Tumor Institute, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Date: Nov 12, 1977
Duration: Continuous; 8 am-12 pm
Designed For: General practitioners; Specialists

Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, open question, panel
Contact: George R. Blumenschein, MD, Associate Director of Education, M.D. Anderson Hospital and Tumor Institute, Texas Medical Center, Houston 77030 or Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77030

Metabolism

Title: Metabolic Aspects of Critically Ill Patients
Sponsors: American Medical Association, Chicago; UT Health Science Center at Houston
Location of Course: Hilton Palacio del Rio, San Antonio
Dates: Nov 17-18, 1977
Fee: $30
Credit: 13 hours, Category 1, AMA Physician's Recognition Award
Contact: Mrs M. Nagy, AMA Department of Foods and Nutrition, 535 N Dearborn St, Chicago 60610

Neurology

Title: Chiasmal Disorders Conference
Sponsors: Texas Neurological Institute; Departments of Neurology and Ophthalmology, UT Health Science Center at Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: Medical City Hospital, Dallas
Date: Nov 15, 1977
Fee: $30, includes lunch
Designed For: Specialists in Neurology, Internal Medicine, Ophthalmology; General practitioners
Credit: 6 hours, AMA Physician's Recognition Award
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Ophthalmology

Title: Symposium on Strabismus
Sponsors: Department of Ophthalmology, Baylor College of Medicine; Texas Ophthalmological Association
Location of Course: Houston Marriott Hotel, Houston
Dates: Nov 18-19, 1977
Fees: Texas Ophthalmological Association members, No fee; Nonmembers, $100; Residents, $25
Credit: 11½ hours, Category 1, AMA Physician's Recognition Award
Contact: Baylor-TOA Strabismus Course, Texas Children's Hospital, Department of Ophthalmology, Houston 77030

Psychiatry

Title: Diagnosis and Management of the Child with Minimal Brain Dysfunction
Sponsors: UT Health Science Center at San Antonio; Child Study Center, University of Arkansas College of Medicine
Location of Course: UT Health Science Center Auditouim, San Antonio
Dates: Nov 3-4, 1977
Fee: $20
Credit: 10 hours, Category 1, AMA Physician's Recognition Award
Contact: Timothy N. Caris, MD, Associate Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Title: Kinetics of Psychiatric Drugs
Sponsor: Texas Research Institute of Mental Sciences, Houston
Location of Course: Houston
Dates: Nov 28-30, 1977
Contact: Joseph C. Schoolar, PhD, MD, or James L. Claghorn, MD, 1300 Moursund, Houston 77030

Urology

Title: Urology '77
Sponsor: Continuing Education Division, UT Medical Branch, Galveston
Location of Course: Galvez Hotel, Galveston
Dates: Nov 9-12, 1977
Duration: Continuous, 3 days, 20 total course hours
Designed For: Specialists; General practitioners
Fee: $80
Enrollment: Minimum, 75; Maximum, 125
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: NeKee McNulty, Assistant Director, Continuing Education Division, UT Medical Branch, Galveston 77550

Other

Title: Regional Workshop on Quality Assurance
Sponsor: Commission on Professional and Hospital Activities, Ann Arbor, Mich
Location of Course: Gunter Hotel, San Antonio
Dates: Nov 2-3, 1977
Designed For: Hospital administrators, hospital trustees, health record analysts, utilization review coordinators, medical record practitioners, other health care professionals, physicians interested in administrative functions
Fee: $85
Credit: 6 hours, AAFP Elective; Category 1, AMA Physician's Recognition Award
Contact: Commission on Professional and Hospital Activities, 1968 Green Rd, Ann Arbor, Mich 48105

Title: Hospital Medical Staff Leadership Workshop
Sponsor: American Medical Association, Chicago
Location of Course: Marriott Motor Inn (Downtown), Dallas
Dates: Nov 4-5, 1977
Fee: AMA member, Medical society staff,

$150; Nonmember, $200
Credit: Category 1, AMA Physician's Recognition Award
Contact: AMA, Department of Hospitals and Health Facilities, 535 N Dearborn St, Chicago 60610

DECEMBER

Cardiovascular Disease

Title: Selected Topics in Cardiology
Sponsor: UT Health Science Center at Houston
Dates: Dec 6-8, 1977
Duration: Continuous, 10 total course hours
Designed For: General practitioners; Specialists; Elementary and advanced students of Cardiology
Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Obstetrics & Gynecology

Title: To be announced
Sponsor: Southwestern Gynecologic Assembly
Location of Course: Sheraton-Dallas Hotel, Dallas
Dates: Dec 1-3, 1977
Duration: Continuous; 15 total course hours
Fee: $150
Designed For: Specialists in Obstetrics & Gynecology
Credit: Category 1, AMA Physician's Recognition Award; 25 cognates, American College of Obstetricians & Gynecologists
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: R. Mainord Todd, MD, 8226 Douglas, Dallas 75225

Ophthalmology

Title: Contact Lens Course
Sponsor: Baylor College of Medicine
Dates: Dec 1-3, 1977
Duration: Continuous; 3 days
Fee: $200
Designed For: Specialists in Ophthalmology
Teaching Methods: Audiovisual materials, enrollee performs procedure, lecture, open question
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Pediatrics

Title: Pediatrics for the Practitioner
Sponsor: UT Health Science Center at San Antonio
Location of Course: La Mansion Motor Hotel, San Antonio; UT Health Science Center at San Antonio
Dates: Dec 16-18, 1977
Fee: $165
Credit: 16 hours, AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Contact: William T. Kniker, MD, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Psychiatry

Title: Phenomenology and Treatment of Anxiety
Sponsor: Department of Psychiatry, Baylor College of Medicine, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Dec 1-2, 1977
Duration: Continuous
Fee: $150
Designed For: General practitioners; Specialists in Psychiatry, Internal Medicine, Family Medicine
Credit: 16 hours, Category 1, AMA Physician's Recognition Award
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Other

Title: Physiologic Basis in the Care of the Trauma Patient
Sponsors: Department of Surgery, Southwestern Medical School; UT Health Science Center at Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: Richardson Lecture Hall, D1.502, UT Health Science Center at Dallas
Date: Dec 3, 1977
Fee: $50
Enrollment: Maximum, 225
Credit: 6 hours, AMA Psyhician's Recognition Award
Contact: Norma Wilcox, Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

MEDICAL ARTS CLINIC ASSOCIATION of corsicana

ANESTHESIOLOGY
LARRY R. STEVENER, M.D., F.A.C.A.

DERMATOLOGY & SYPHILOLOGY
JOSEPH M. GLICKSMAN, M.D., F.A.A.D.*
J. D. SMITH, M.D., F.A.A.D.*

FAMILY PRACTICE
ENNIS, TEXAS
W. B. KINZIE, MD., D.A.B.F.P.

GENERAL & VASCULAR SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S*
E. SCOTT MIDDLETON, M.D., F.A.C.S.*

GENERAL, VASCULAR & THORACIC SURGERY
ROSS B. REAGAN, M.D.*

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
ALLEN M. JONES, M.D.*
JOHN D. NELSON, M.D.*
L. BRYAN COTTON, JR., M.D.*
KENT ROGERS, M.D.*
JACK B. BANKHEAD, M.D.

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
W. GENE MURFF, M.D., F.A.C.O.G.*
NEAL GREEN, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D., F.A.A.O.O.*

ORTHOPAEDIC SURGERY
JAMES A. DOTSON, M.D.*

PATHOLOGY
MARY G. BANKHEAD, M.D.*

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D., F.A.A.P.*
MASON P. GILFOIL, M.D.

UROLOGY
WILLIAM V. HALL, M.D., D.A.B.U., F.A.C.S.*

EXECUTIVE DIRECTOR
DON L. BOWEN, M.G.M.A.

*DIPLOMATE OF THE AMERICAN BOARD

TRAVIS CLINIC FOUNDATION AND TRAVIS CLINIC ASSOCIATION

JACKSONVILLE, TEXAS 75766

STAFF

General Surgery:
L. L. Travis, M.D., Emeritus
Ken E. Kuykendall, M.D.
E. O. Bonsukan, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.
Spencer Kent, M.D.

Pathology:
Harbert Davenport, Jr., M.D.
Jimmy B. Harkins, M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
Mary A. Bone, M.D.
J. A. Armstrong, M.D.
D. B. Turner, M.D.
K. A. Majmundar, M.D.
B. Ruyani, M.D.
Wm. N. Meshel, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Dermatology:
T. S. Arrington, M.D.

Pediatrics:
M. L. Gray, M.D.
G. Majmundar, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

Podiatry:
Daniel H. Phelps, D.P.M.

Psychology:
Charles T. Fries, Ed.D.

Business Manager:
Gerald L. Burks

H. E. Eugene Bonham, M.D.

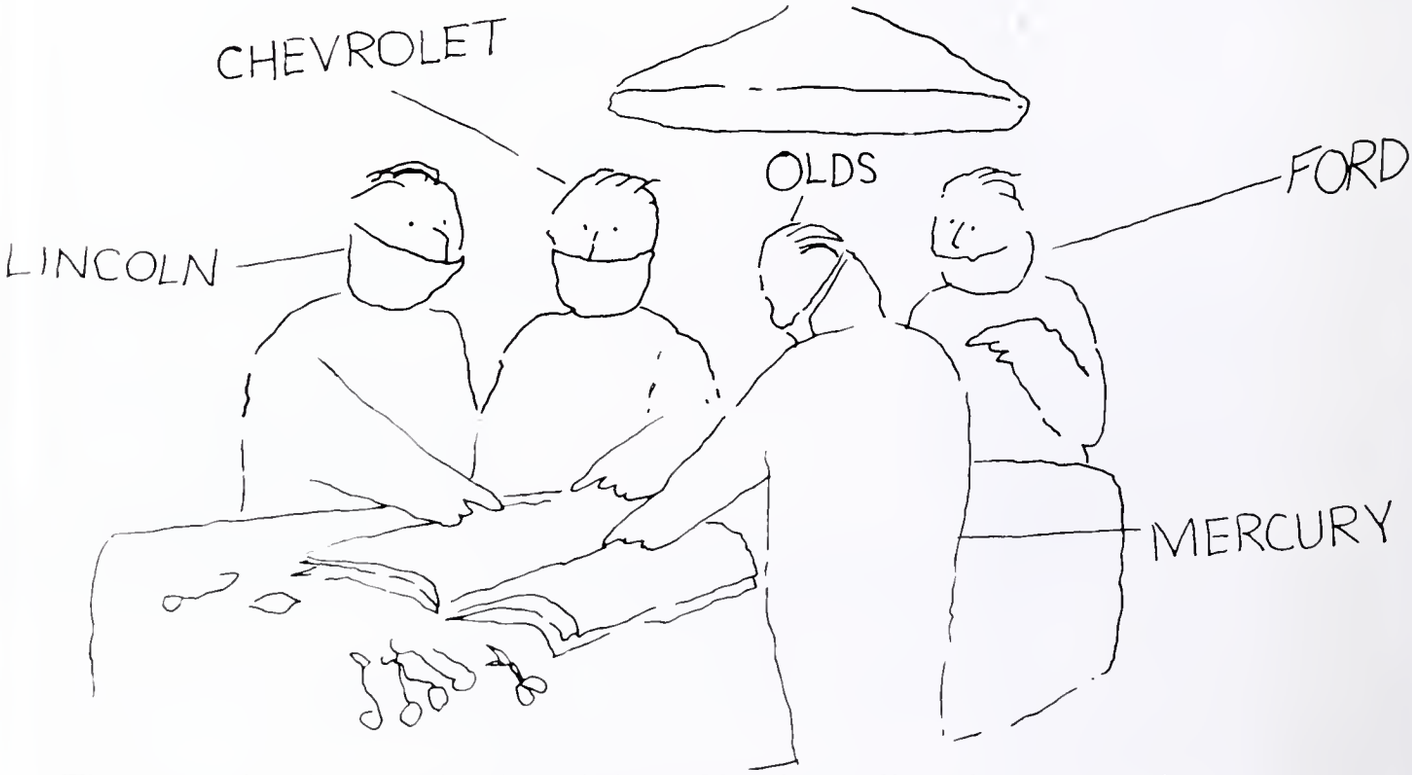
Diplomate American Board of Psychiatry & Neurology

Geraldine M. Bonham, B.A., B.S.N., R.N.

PERSONAL AND FAMILY COUNSELING
ADULT AND CHILD CONSULTATIONS
and
PSYCHOTHERAPY

1200 Summit Ave., Suite 526, Fort Worth, Texas 76102 817 335-3491

The operation is easy when we put our cars on the table.



The operation is completely painless. You just tell us the cars you're interested in. Any car, American or foreign. Color brochures with all the information available. Then we'll make all the leasing arrangements. At Southwest Motor Leasing, we lay our cards on the table too. So you know exactly what you're getting. No hidden extras. No surprises.

- Tax write-offs
- Low lease costs
- Positive cash flow
- No record keeping necessary
- Custom tailored leases
- Total maintenance on selected Lincoln-Mercury product lines

Texas Medical Association Automobile Lease Program

Underwritten by:

Bankston Rentals, Inc. • 4747 LBJ Freeway • Dallas, Texas 75234 • 214/233-1441
Southwest Motor Leasing, Inc. • 6737 Southwest Freeway • Houston, Texas 77074 • 713/777-3816

If the AMA didn't speak for the profession, who would?

Who would speak for the profession on the 2,500 health bills introduced in every Congress? Or the regulations issued by federal agencies?

Who would state the profession's views on national health insurance? Utilization Review Regulations? The Health Planning Act of 1974? Maximum Allowable Cost Regulations? Health Manpower?

Who would provide the scientific input and the practitioner's experience and knowledge so essential to legislation on drugs, cancer, heart disease, communicable diseases? Can you think of anyone?

The fact is, there is only one organization that can — and does — speak for the profession as a whole. The AMA.

It does so to protect the basic freedoms of medical practice in any federal health program that might be enacted, and even more important, to promote legislation for better health care for the entire public.

The AMA's voice can only be as strong as the members of the profession choose to make it. With your support, the AMA can be even more effective spokesman

AMA
AMERICAN MEDICAL ASSOCIATION

Join us.
We can do much more together.

Dept. of Membership Development
American Medical Association
535 N. Dearborn St./Chicago, IL 60610

Please send me more information on the AMA and AMA membership.

Name _____

Address _____

City/State/Zip _____

Kefzol® I.M./I.V.
cefazolin sodium

Ampoules, equivalent to 500 mg., 1 Gm.,
and 10 Gm. of cefazolin

Lilly

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

700773

Animal bites as a public health disease

Evret C. Newman, DVM

A 17-year-old girl in Ohio was attacked and killed by a Great Dane which exhibited no evidence of viciousness before or after the attack.[28] A 5-year-old boy in Nevada was killed by a pack of seven neighborhood pet dogs.[27] A 4-year-old boy in New Mexico had his skull fatally crushed by the family St Bernard.[9] An infant girl in California suffered multiple dog bites to her face and head, including compound depressed skull fractures.[17] None of these victims knowingly provoked the biting animals.

These are not rare or isolated episodes, but a few of the most recent and readily noticed signs of a growing disease problem. Bites inflicted by domestic animal pets no longer can be regarded only as accidental injuries or possible precursors of rabies or other infectious processes. Animal bites must be considered as a specific disease entity. The fight against infectious diseases involves a basic knowledge of microbiology. Similarly, combating the disease of animal bites entails a thorough understanding of the agents involved.

Historically, rabies has been the primary cause of concern in animal bite cases.[15] *Pasteurella multocida, Staphylococcus aureus,* and *Clostridium tetani* infections also have been reported as complications of animal bites.[25] A less recognized complication of animal bites is the psychological trauma suffered by victims and their families.[15] From a public health viewpoint, viral and bacterial infections and psychological trauma should be regarded only as possible complications of the primary disease.

Bite Rates

The annual animal bite rate in the United States is estimated to be 500 people bitten for every 100,000 in the human population, or one person bitten in each 200 people.[19] The Center for Disease Control has reported bite rates ranging from 215/100,000 to 809/100,000 in various localities across the United States.[29] Continual monitoring and retrospective studies of reported bite cases indicate a steady increase in the occurrence of the disease. One Midwestern city experienced an increase in the rate of reported animal bites from 396/100,000 in 1972 to 448/100,000 in 1973.[2] From 1953 through 1972 the reported animal bite rate in a large Eastern city nearly tripled, going from 303/100,000 to 896/100,000.[3]

One of the obstacles in a study of this disease is the lack of information. An effective and uniform animal bite reporting system would make more accurate data available and would permit the application of intelligent control measures. No one actually knows how many cases of the disease occur and many of the etiological details remain largely theoretical. The Texas Animal Bite Surveillance program was implemented only a few years ago and offers limited information. Even though this data probably results in below-actual rates, it presents a disturbing picture of the animal bites inflicted on Texas citizens from 1971 through 1976.

The annual reported bite rate ranged from 295/100,000 to 336/100,000 during 1971-1976.[24] Application of these rates to human population figures for the same period indicate that 34,000 to 41,000 persons have been bitten every year.[6] It is certain that these are not all of the animal bites that were inflicted.

By interviewing a randomly selected one third of the households in the West Texas cities of Alpine, Marfa, and Van Horn as part of an animal community health project, we discovered a bite rate

of 2,059/100,000. This figure is more than six times greater than the reported rates for Texas and four times greater than the national rates. This could indicate that the average West Texas dog is six times more vicious than his cousins elsewhere in the state, but the real reason for the difference is discrepancy between reported and unreported animal bites. It has been stated that only one half, and possibly as few as one fourth, of all animal bites are brought to the attention of public health or animal control officials.[1] Comparison of the bite rates in Alpine, Marfa, and Van Horn to the reported rates in the state indicates that as few as one sixth of the bites may be reported. Therefore, an estimate of 136,000 to 246,000 Texas citizens bitten annually may be a more accurate figure. In addition, we found that only 57% of the victims in the three cities we studied consulted a physician after being bitten. While causing concern in regard to possible rabies exposure, this information also illustrates deficiencies in the existing animal bite reporting mechanism and a definite need to increase public awareness of this disease problem.

Victims

The most common victims of animal bites are male children and young male adults. A study in Baltimore revealed that two thirds of the persons bitten were under 25 years of age with the 5- through 14-year-old group accounting for 40%. Sixty-two percent of the victims were males.[3] In Texas, 62% of the reported animal bite victims in the past six years were less than 20 years of age and 36% were children under 10. Males suffered 60% of the total reported bites in the state.[24]

Victims of the animal bites are affected most often on their legs, arms, or hands, with fewer wounds inflicted in the areas of the face, head, and trunk.[2,8,18] In Texas, 74% of the reported victims were bitten on the extremities, 10% in the head area, and 9% on the trunk. Four percent suffered multiple bite wounds.[24]

The serious nature of this disease in younger age groups is illustrated by the fact that the facial area is most commonly affected; one study of dog bites in children reported that 82% of the victims examined were bitten in the face, head, and neck.[5,14] If the expenses of medical treatment, animal capture and examination, epidemiological investigation of reported bites, and other costs are considered, animal bites may be one of our most expensive childhood diseases.[15] Only estimates of the total annual number of cases exist, and we can only speculate as to their impact on society.

Biting Animals

Dogs are the animals most frequently involved in bite episodes. The Center for Disease Control surveillance project has shown that dogs account for 84% of the reported bites in the United States.[29] In Texas, dogs were responsible for 83% of the reported bites inflicted in the last six years and cats accounted for 12%.[24] One hospital emergency department reported that bite wounds composed nearly 1% of the total patient volume and that dogs were the offending animals in 63% of the cases.[8] Fewer people are bitten by cats than by dogs, but cat bites result in secondary infections three times as often.[12]

Contrary to popular opinion, it is not stray or wild dogs that most often bite people. Owned but unconfined dogs are the real villains. An unconfined pet may develop into a permanent stray and, if able to adapt to the harsher environment away from man's care, can become a feral dog. The feral dog is a true wild animal, able to survive and reproduce in nature, with a strong fear of man and his habitations.[16] Domestic dog-coyote hybrids occur, but these animals also exhibit fear of man and

are not involved in the usual bite episodes.[23]

Our work in Alpine, Marfa, and Van Horn showed that only 15% of the bites were inflicted by animals for which no one would admit ownership. This figure is nearly identical to the 15% and 17% "unowned" biters reported in St Louis and Baltimore.[2,3] Animals owned by the victims or their families inflicted 36% of the bites in the three cities we studied and the remaining 49% of the biting animals were owned by other people. Three of every four bites reported in Texas are from owned animals.[24] A Baltimore study reported that 19% of the people bitten were injured by their own dogs and 64% by pet dogs belonging to other persons.[3] Nationwide reports correspond closely to this information with more than 85% of the reported dog bites involving privately owned pets.[26]

As anyone who jogs, walks, or rides a bicycle can testify, there is no shortage of dogs and cats. A recent California survey reported one dog for every 7 persons and one cat for every 11 persons.[21] In contrast, our studies in Alpine, Marfa, and Van Horn revealed one dog for every four persons and one cat for every six persons. We also found that 55% of the households had at least one dog, 15% had two dogs, and 7% had three or more. Only 26% of the households owned cats; 5% owned two cats, and another 5% owned three or more. These household figures are similar to a nationwide survey in which an estimated 55% of United States families were reported to own a dog, a cat, or both.[31] Of more immediate concern than the total numbers of animals, we found that only 42% of the dogs and 12% of the cats in Alpine, Marfa, and Van Horn were confined to their owners' property. Dogs and cats obviously do the biting, but the failure of owners to restrain their pets is a major contributing factor in this disease.

The current supply of dogs more than meets the demand, and there is no evidence that the supply will significantly decrease in the near future. One national study revealed that 48% of all female pet dogs had been spayed and only 12% of all male pet dogs had been castrated.[31] A report from California showed similar figures.[21]

Information obtained during our studies in Alpine, Marfa, and Van Horn is considerably different. Only 11% of the bitches had been spayed and less than 1% of the male dogs had been castrated. In spite of the variation in data from these studies, all three indicate that more than one half of the dogs of both sexes are sexually intact. The excessive numbers of sexually intact, unwanted dogs and cats that are allowed to roam freely not only perpetuate their species but also serve as the source of a number of zoonotic diseases, including animal bites.

The reproductive abilities of unconfined pets can best be illustrated by the records of almost any municipal animal control agency. During 1976, El Paso Animal Regulation and Disease Control personnel handled nearly 18,000 animals, of which 85% died or were euthanized.[20]

As a matter of interest, antibodies against *Yersinia pestis* have been found in dogs, and the increasing concentrations of people, unconfined dogs, rats, and the arthropod vectors may be creating conditions suitable for plague epidemics.[10] It must be emphasized that the unconfined pets are under criticism, and there is no evidence indicating an excess of pet dogs or cats in the custody of responsible owners.[11]

Reducing Bites

At various times and with different methods, Iceland, China, and Cyprus, have drastically reduced their dog and cat populations because of economic or disease situations.[13,22,30] Elimination of the

unconfined pet population, the primary goal of most municipal animal control agencies, could reduce the number of animal bites if such agencies had access to unlimited financial, personnel, and educational resources. Irresponsible pet owners must be encouraged to fulfill their obligations to their pets and to the community by continuously confining their animals, thereby greatly reducing the number of potential biters.

Reduction in the number of animal bites also could be achieved if potential victims knew how to behave when near dogs.[4] This does not mean that most victims are bitten as a result of deliberate provocation; it does indicate a need for greater public knowledge of animal behavior patterns. Many educational programs dealing with this are under way, including several in Texas.

Conclusion

The disease of animal bites is not transmissible and no immunization is available for the population at risk. It most often affects the younger age groups in degrees of severity ranging from minor injuries to death. The primary vectors of the disease are irresponsible pet owners and the major causative agents are unconfined pet dogs. As with other diseases of public health importance, the official surveillance of animal bites should be the responsibility of health departments.[7,22] Only with the knowledge gained by such surveillance can the disease be controlled, reduced and eliminated.

Acknowledgement

John L. Bradley, MD, and Lawrence W. Pessarra, DVM, Texas Department of Health, assisted with obtaining bite information.

References

1. Beck AM: Ecology of unwanted and uncontrolled pets. Proceedings, National Conference on the Ecology of the Surplus Dog and Cat Problem, 31-39, 1974.
2. Beck AM, Loring H, Lockwood R: The ecology of dog bite injury in St Louis, Missouri. Public Health Rep 90 (3):262-267, 1975.
3. Berzon DR, DeHoff JB: Medical costs and other aspects of dog bites in Baltimore. Public Health Rep 89 (4):377-381, 1974.
4. The bite of the dog. Emergency Med 46-47 (Dec) 1971.
5. Chait LA, Spitz L: Dogbite injuries in children. S Afr Med J 49(17):718-720, 1975.
6. Current population reports. Population Estimates and Projections, Series P-25, US Department of Commerce, 1971-1976.
7. DeHoff JB: Roaming animals, the health commissioner's view. Proceedings, National Conference on Dog and Cat Control, 47-51, 1976.
8. Douglas LG: Bite wounds. Am Fam Physician 11:93-99, 1975.
9. El Paso Times, Home Edition. March 12, 1977.
10. Faulkner LC: Dimension of the pet population problem. J Am Vet Med Assoc 166:477-478, 1975.
11. Faulkner LC: Alternatives to ovario-hysterectomy. Proceedings, National Conference on Dog and Cat Control, 124-130, 1976.
12. Francis DP, Holmes MA, Brandon G: *Pasteurella multocida*. Infections after domestic animal bites and scratches. JAMA 233:42-45, 1975.
13. Goldwyn RM: Editorial: Man's best friend. Arch Surg 111:221, 1976.
14. Graham WP 3d, Miller SH, Calabretta AM: Dog bite. Pa Med 78:16, 1975.
15. Jones DO: Public health hazards of uncontrolled pets. Proceedings, National Conference on Dog and Cat Control, 40-46, 1976.
16. Nesbitt WH: Ecology of a feral dog pack on a wildlife refuge. The wild canids. New York, Van Nostrand Reinhold, 1975, pp 391-395.
17. O'Riordan WD, Hubbell DV: Compound depressed skull fracture. JACEP 5:123-124, 1976.
18. Parrish H, Clack FB, Brobst D, et al: Epidemiology of dog bites. Public Health Rep 74:891-903, 1959.
19. Proceedings, National Conference on Dog and Cat Control, 257, 1976.
20. Rabia and rabies border epidemiological surveillance. US-Mexico Border Public Health Association, El Paso, Pan American Sanitary Bureau, 1976.
21. Schneider R, Vaida ML: Survey of canine and feline populations: Alameda and Contra Costa Counties California, 1970. J Am Vet Med Assoc 166:481-486, 1975.
22. Schwabe CW: Veterinary medicine and human health. Baltimore, Williams and Wilkins Co, 1964, p 288.
23. Silver H, Silver WT: Growth and behavior of the coyote-like canid of Northern New England with observations on canid hybrids. Wildlife Monographs, 17:6-40, The Wildlife Society, 1969.
24. Texas Animal Bite Surveillance Report. Texas Department of Health Resources, 1971-1976.
25. Tindall JP, Harrison CM: Animal bites and scratches, how concerned should we be. Continuing Education 19-25, (Jan) 1974.
26. Veterinary Public Health Notes. Center for Disease Control, DHEW, (March) 1975.
27. Veterinary Public Health Notes. Center for Disease Control, DHEW, (July) 1975.
28. Veterinary Public Health Notes. Center for Disease Control, DHEW, (Aug) 1975.
29. Veterinary Public Health Notes. Center for Disease Control, DHEW, (Nov) 1975.
30. Veterinary Public Health Notes. Center for Disease Control, DHEW, (Nov) 1976.
31. Wilbur RH: Pets, pet owners and animal control, social and psychological attitudes. Proceedings, National Conference on Dog and Cat Control, 21-34, 1976.

Evret C. Newman, DVM, Division of Zoonosis Control, Bureau of Veterinary Public Health, Texas Department of Health, Public Health Region 3, PO Box 10736, El Paso, TX 79997.

Advances in management of chronic asthma in children

Susan C. Jacob, MBBS, DCH; Katharine H. K. Hsu, MD

Recent advances in the management of chronic asthma are reviewed. Theophylline, administered in properly determined dosage, based on its degradation rate, is usually the drug of choice for the management of chronic asthma. Serum theophylline levels between 10-20 μg/ml produce maximum therapeutic effect without toxicity. High-pressure liquid chromatography can be used to measure serum theophylline levels to determine therapeutic dosage and detect patient compliance. The relation between theophylline levels in serum and in saliva has been studied. The importance of pulmonary function tests to measure optimum therapeutic effect and the use of the Wright peak flow meter to monitor progress of the disease are discussed.

Asthma is a complex disease characterized by widespread narrowing of large and small airways. The factors triggering airway obstruction are many, including allergens, infections, irritants, or psychophysiologic reasons acting singly or in combination. Children with chronic asthma tend to have numerous acute attacks of wheezing requiring emergency treatment. In between attacks these children may have varying degrees of airway obstruction which limit their physical activities, while those with the more severe cases of asthma may wheeze continuously between severe attacks. The objective of this article is to present briefly how chronic asthma can be effectively controlled by application of new technology.

Theophylline Serum Level as a Guide to Optimum Therapy

Although theophylline has been used in the treatment of asthma for more than 35 years, the proper use of this drug has come to light only recently. It is now the mainstay of drug therapy for asthma. Ellis has shown great individual variation in the degradation rate of theophylline in children. The half-life ranges from 1.42 to 7.85 hours,[1] so an adequate dose for one child may be totally inadequate for another. The theophylline dosage required to maintain the optimal therapeutic serum levels of 10-20 μg/ml must be established for each patient.[2,3] This level will assure maximum bronchodilating effect and avoid toxicity. Therefore, the key to optimal theophylline therapy is the ability to measure the serum theophylline level.

Theophylline should be given round the clock to a chronic asthmatic to prevent recurrent attacks of asthma. In our experience a dosage of 5-6 mg/kg given every six hours may maintain therapeutic levels of 10-20 μg/ml in most cases. However, as mentioned before, the amount and the time schedule has to be adjusted for each patient according to the degradation rate of the drug in the individual. If serum level exceeds 20 μg/ml symptoms of toxicity may appear.[2,4,5] The most common such symptoms are nausea, vomiting, and abdominal pains. Other symptoms to watch for are headache, flushing, hypotension, arrhythmia, and convulsions.

Liquid Chromatography for Measurement of Serum Theophylline Levels

Different means are available for the determination of the serum theophylline levels. We have chosen high-pressure liquid chromatography for several reasons: (a) The results can be obtained within five to seven minutes, (b) a small serum sample of 0.5 cc is sufficient for the test, (c) the high sensitivity of the equipment will de-

tect theophylline levels as low as 1·2 μg/ml, and (d) the test is specific and results are not affected by theobromine and caffeine.[6]

Gas chromatography is as sensitive as high-pressure liquid chromatography but the procedure is more time consuming.[6] The Schack and Wexler method[6] requires a larger blood sample and caffeine and theobromine interfere with results.

At the pediatric asthma clinic of Jefferson Davis Hospital, the optimum dose for each patient is established by his serum level. Before the serum theophylline level is determined, the parents are instructed to give the drug regularly for two days in order to achieve a "steady state." Although the peak serum level varies from patient to patient, the usual time to draw the blood is two hours after an oral dose.

Patient compliance is essential for successful management of chronic asthma. Children hate to admit that they did not take their medicine, especially when they come to the clinic wheezing and know it was their own fault. The serum theophylline level reveals the truth and points to the need for more patient counseling and parent education about the disease and the importance of regular drug intake. By checking for compliance at this clinic, we have detected good compliance such as the cases shown in Fig 1, but there are also cases of poor compliance. Detection of noncompliance is illustrated by the following case:

1. A few results of spot checking for serum theophylline levels showing good compliance.

Case	Mg/Kg/Dose	Where Taken	Serum Theophylline Level
1	4.0	Home	14.0 μg/ml
2	5.5	Home	12.0 μg/ml
3	5.9	Home	11.0 μg/ml
4	4.3	Home	18.2 μg/ml
5	6.5	Home	12.6 μg/ml
6	5.0	Home	17.5 μg/ml

The patient, whose prescribed dose of theophylline was 5.9 mg/kg, had a serum level of 0.5 μg/ml two hours after supposedly taking his medicines at home. To determine whether this low level resulted from noncompliance or from an unusually rapid degradation rate of the drug, the same dosage of theophylline was given in the clinic, and two hours later another blood sample was drawn. The theophylline level was found to be 11.0 μg/ml which is within the therapeutic range. This confirmed that the low serum level was due to noncompliance and hence there was no need to increase the dose of theophylline.

It would be advisable to check the serum theophylline level periodically, for as the child grows his theophylline intake has to be increased to maintain therapeutic serum levels. Interaction with other drugs, febrile illness, and tobacco smoking change the degradation rate of the drug.

Theophylline Levels in Saliva

Significant correlation between theophylline levels in saliva and serum was reported by Levy in a study of 16 asthmatic children.[7] As pediatricians, we were interested in knowing whether this correlation was consistent enough to allow assessment of serum level by testing the saliva in a clinic setting. To avoid individual variation of technique, all the specimens were collected by the same doctor and nurse. Before the saliva was collected the child was asked to rinse his mouth with water to avoid contamination by food, drink, and medication. Mixed saliva was collected in a sputum jar by having the patient spit into it. Sometimes it was necessary to promote the flow of saliva by having the child smell a cut lemon. Blood was then drawn for serum theophylline. Blood and saliva specimens were collected within a five-minute period.

Forty-nine pairs of saliva and serum specimens were so collected. Each pair was processed through the high-pressure liquid chromatograph at the same

sitting. The correlation of the serum and saliva theophylline levels obtained is shown in Fig 2. Saliva theophylline levels in most cases were between 60% and 80% of the serum levels. In two cases the saliva levels were only 16% and 3% of the serum levels.

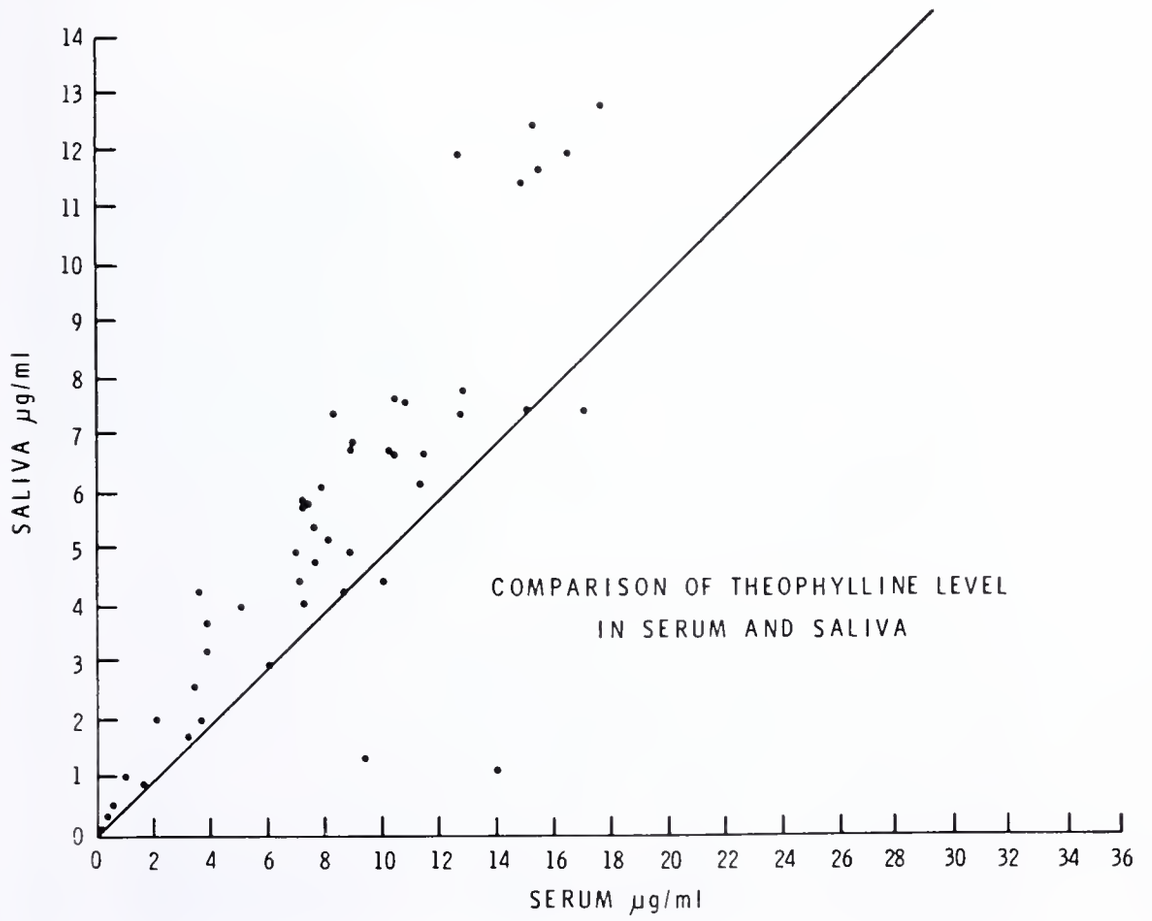
As a result of this study we feel that the correlation between saliva and serum theophylline levels is not consistent enough to assess the serum theophylline level by testing the saliva level.

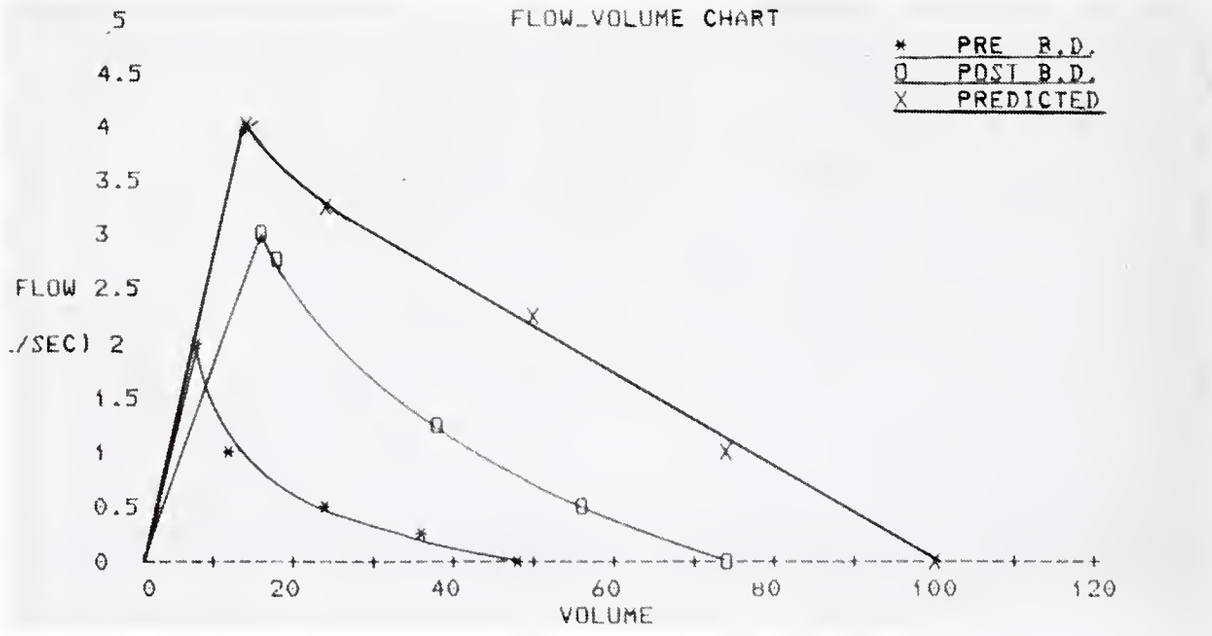
Importance of Pulmonary Function Test

Absence of wheezing following an acute attack of asthma does not mean complete recovery.[8,9] Indeed the airway obstruction may persist for some time and thus subject the patient to recurrent attacks. For prevention of future attacks it is important to detect the residual abnormalities in the bronchial tree, including submucosal edema and small airway obstruction. These changes may not cause wheezing but they can be readily detected and measured by pulmonary function studies.

Most pediatricians are familiar with forced expiratory volume at one second and forced vital capacity. Unfortunately these two parameters of the spirometric reading may not reflect small airway obstruction.[8] It is reflected by the maximum mid-expiratory flow rate. This reading would remain significantly reduced in an asymptomatic patient with small airway obstruction while the forced expiratory volume at one second and forced vital capacity readings may return to normal.[9] This is illustrated by the following case:

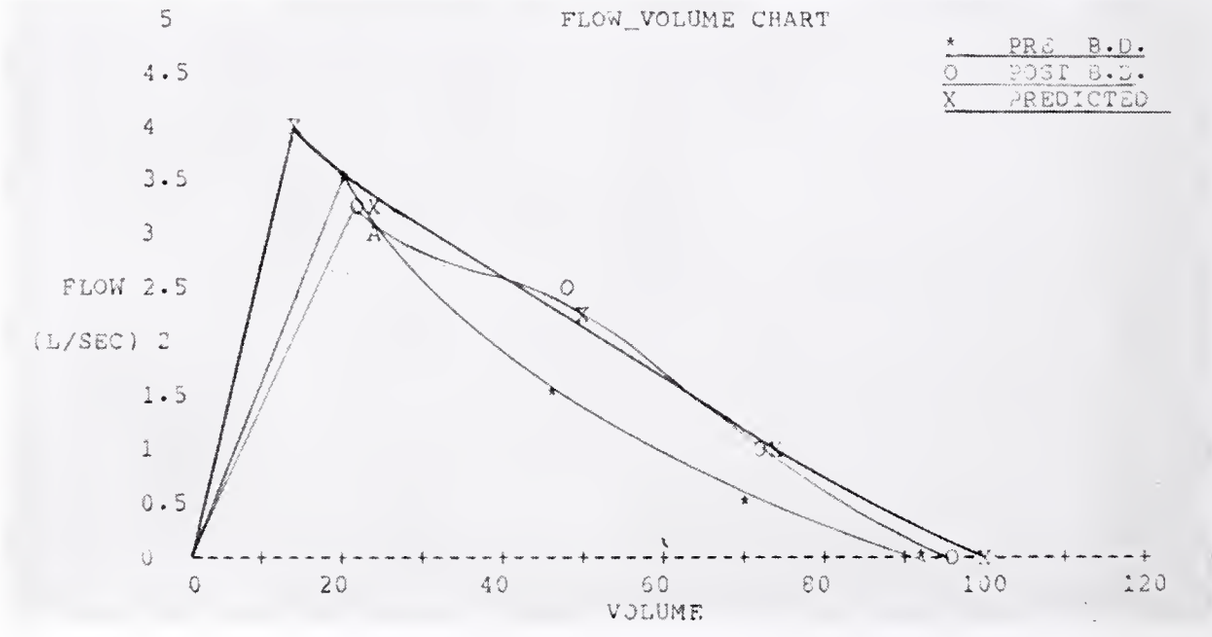
2. Comparison of theophylline levels in serum and saliva in 49 pairs of specimens collected in the pediatric asthma clinic, Jefferson Davis Hospital, Houston.





3. Flow volume curves taken within two weeks following an acute attack of asthma. The four points marked on the curve are the peak flow and the flow rate at 75%, 50%, and 25% of vital capacity. The three flow volume curves indicate the predicted normal (X), before use of bronchodilator (*), and after use of bronchodilator (0).

4. Flow volume curves repeated following two weeks of round-the-clock treatment with theophylline.



The patient is a 10-year-old black boy with chronic asthma. Attacks of asthma started when he was 9 months of age. He was having seven or eight severe attacks a year, requiring emergency treatment. In between these severe attacks he had frequent wheezing which restricted his physical activities. He was seen at the Jefferson Davis Hospital asthma clinic for the first time within two weeks following an emergency room visit in another hospital. By then he was symptom free. On examination the breath sounds were normal and there was no wheeze on normal respiration. However, wheezing was heard when he was instructed to do a prolonged and forceful expiration. Results of the pulmonary function study of this patient at that time are shown in Fig 3. Although the child had no symptoms, there was reduction of flow rate and vital capacity. After Isuprel inhalation, considerable increase in flow rate and vital capacity were noted. The reversibility of airway obstruction is characteristic of asthma.

The child was then given round the clock treatment with theophylline in order to maintain therapeutic serum levels. Two weeks later the degree of airway obstruction was reevaluated. The flow rate had improved and approached normal range (Fig 4).

If airway obstruction persists in spite of maintaining round the clock therapeutic levels of theophylline, the addition of other drugs such as cromolyn sodium

5. The Wright peak flow meter.

or terbutaline, a β_2 agonist, would be indicated. If allergy is a significant triggering factor in asthma, immunotherapy may be helpful.

Use of Peak Flow Meter in Chronic Asthma

In office practice where a pulmonary function laboratory is not available, the Wright peak flow meter can be used to monitor the progress of the disease. It is relatively inexpensive, costing about $300. Active cooperation is needed on the part of the children in the use of the equipment, as the peak expiratory flow rate measurement is effort dependent (Fig 5). Because of this, only children older than six or seven can be instructed on its usage. Each child must be shown how to use it and be allowed to practice. The patient blows into the machine three times and the best effort[10] is compared to the predicted mean which is calculated according to his height. The prediction equation for peak expiratory flow rate (PEFR) as given by Polgar and Promadhat[11] is as follows: PEFR in boys and girls (liters/minute) = $-425.5714 + 5.2428 \times$ ht (cm). The predicted means for various heights calculated from this equation are given in Fig. 6.

Like the forced expiratory volume at one second peak flow rate reflects mainly large airway resistance and may not reflect peripheral small airway obstruction. However, it can be used to monitor the progress of the disease. An increase in the peak flow rate indicates favorable response to treatment while a drop from the child's usual performance is a warning signal of the increase in airway obstruction.

Height in cm.	Liters/min
110	150
115	175
120	200
125	225
130	250
135	275
140	300
145	325
150	350
155	375
160	400
165	425
170	450

6. Peak flow rate. Predicted mean for various heights calculated from regression equations by Polgar and Promadhat.[11]

References

1. Ellis EF, Koysooko R, Levy G: Pharmacokinetics of theophylline in children with asthma. Pediatrics. 58:542-547, 1976.

2. Jenne JW, Wyze E, Rood FS, et al: Pharmacokinetics of theophylline. Application to adjustment of the clinical dose of aminophylline. Clin Pharmacol Ther 13:349-360, 1972.

3. Weinberger MM, Bronsky EA: Evaluation of oral bronchodilator therapy in asthmatic children. Bronchodilators in asthmatic children. J. Pediatr 84:421-427, 1974.

4. Mitenko PA, Ogilvie RI: Rational intravenous doses of theophylline. N Engl J Med 289:600-603, 1973.

5. Levy G: Clinical pharmacokinetics; a symposia. Am Pharm Assoc Acad Pharm Sci, Washington, DC, 103, 1974.

6. Jusko WJ, Poliszczul A, Clinical Pharmacokinetic Laboratory, Dept Pharmaceutics, State University of New York at Buffalo: HPLC analysis of theophylline derivatives in biological fluids. Wilmington, Del, El du Pont de Nemours & Co., Inc, 1975.

7. Levy G, Ellis EF, Koysooko R: Indirect plasma, theophylline monitoring in asthmatic children by determination of theophylline concentration in saliva. Pedatrics 53: 873-876, 1974.

8. McFadden ER, Jr, Kiser R, DeGroot WF: Acute bronchial asthma. Relations between clinical and physiologic manifestations. N Engl J Med 288:221-225, 1973.

9. Weng TR, Levison H: Pulmonary function in children with asthma at acute attack and symptom-free state. Amer Rev Resp Dis 99:719-728, 1969.

10. Wright BM, McKerrow CB: The Wright peak flow meter. Br Med J 2:1041, 1959.

11. Polgar G, Promadhat V: Pulmonary function testing in children; techniques and standards. Philadelphia, WB Saunders Co, 1971, pp 188-194.

Susan C. Jacob, MBBS, DCH, Instructor in Pediatrics; Katharine H. K. Hsu, MD, Professor of Pediatrics, Baylor College of Medicine, Houston, TX 77030.

Reprint requests to: Dr. Jacob, Department of Pediatric Chest Disease, Jefferson Davis Hospital, 1801 Allen Parkway, Houston, TX 77019.

Acquired hemolytic anemias of childhood

Kenneth A. Starling, MD; C. Philip Steuber, MD; Dell A. Shepherd, MD

Hemolytic anemias of childhood account for a major proportion of all anemias in children. Every case of anemia results from a disequilibrium between red cell production and destruction. The degree of anemia depends almost entirely upon the degree of imbalance between these two processes. In hemolytic anemias, there is an increase in red blood cell (RBC) destruction. If this increased destruction is minor, the bone marrow will compensate by producing red cells more rapidly. In these instances, clinical anemia may not be present, even though the rate of red blood cell turnover is increased.

Most of the childhood hemolytic anemias are congenital, or hereditary, rather than acquired. These include red cell enzyme defects, hemoglobinopathies, red cell membrane defects, and fetal-maternal blood group incompatibilities. In children, acquired hemolytic anemias usually present as acute anemias, and are only occasionally primary processes, in other words, an underlying illness usually leads to the hemolysis.

The major site of hemolysis can be either extravascular or intravascular. Extravascular hemolysis, the more common type, results in phagocytosis of the damaged RBCs by the reticuloendothelial cells. When intravascular hemolysis occurs, the RBCs are lysed within the blood vessels and hemoglobin is released into the plasma and bound to the protein haptoglobin. If plasma haptoglobin is saturated, then free plasma hemoglobin will accumulate until the renal threshold (90-100 mg/100 ml of plasma hemoglobin) is reached, and hemoglobinuria will occur.

The laboratory diagnosis of hemolytic anemia requires the demonstration of accelerated RBC turnover. The actual level of hemoglobin may vary greatly. There is no evidence of blood loss, either grossly or by stool guaiac tests. The reticulocyte count is usually elevated although if hemolysis has occurred within the prior 12-24 hours; a reticulocyte response may not be seen. A bone marrow aspiration at this time may be helpful by showing erythroid hyperplasia. Even without a reticulocyte increase, nucleated red cells are almost always present on the peripheral smear. The white blood cell count is elevated with increased polymorphonuclear leukocytes and immature myeloid cells. The platelet count may be elevated. Depending on the amount of hemolysis, there may be a decrease in serum haptoglobin secondary to binding of free hemoglobin. If the haptoglobin capacity is saturated, elevated levels of free hemoglobin can be found in the plasma and urine.

Many patients with acquired hemolytic anemia have a positive Coombs test result associated with the different types of red cell antibodies seen in Fig 1. Warm or "incomplete" antibodies are IgG with Rh specificity. Cold antibodies or "cold agglutin-

1. Features of classical autoantibodies.

Warm	Cold (Except for cold hemolysin)
IgG	IgM
7S	19S
Frequent Rh specificity	Often I specificity clinically or A or B specificity naturally
"Incomplete" *in vitro*: a. No agglutination b. Little or no complement fixation c. No complement lysis	"Complete" *in vitro* and *in vivo*: a. Agglutination b. Complement fixation c. May cause complement lysis
Spherocytic hemolytic anemia: *in vivo*	

ins" are large IgM molecules which do not require Coombs serum for agglutination. Both IgM and IgG antibodies utilize complement for their hemolytic activity.

Fig 2 enumerates the causes of acute acquired hemolytic anemia of childhood. All of these hemolytic anemias are secondary to primary diseases with the exception of thrombotic thrombocytopenic purpura and the anemia associated with giant hemangiomas.

Lederer anemia is the most common "acute acquired hemolytic anemia" in children. As its proper name implies, the onset is usually abrupt. More than 90% of the children with this disease have a history of a viral syndrome, usually upper respiratory, one to three weeks before anemia appears. No consistent viral antibody titer elevation has been found in those children studied, although it is known that myxoviruses and herpesviruses can be carried on the red blood cell surface. It is presumed that this virus-red cell membrane complex forms a hapten which induces antibody formation. The peak incidence of these anemias is in mid-childhood with patients ranging in age from three months to the teenage years. The symptoms are simply those of acute anemia-irritability and fatiguability and occasionally symptoms of congestive heart failure. Physical signs are pallor, a rapid pulse, and findings of congestive heart failure. Hemoglobinuria may produce dark urine.

The laboratory findings of Lederer anemia are variable, with a hemoglobin level between 2 and 10 gm/100 ml. Fortunately, most children have a rapid marrow response to the hemolysis with reticulocyte production so that the hemoglobin level stabilizes between 3 and 4 gm/100 ml. Spherocytes may be seen on the peripheral smear. The haptoglobin level is decreased and hemoglobinemia and hemoglobinuria are usually present. About one-half of the children have positive results of Coombs test. If the red blood cells are treated with papain, trypsin, or ficin, almost 100% of children will have positive Coombs test results.

Transfusion therapy with packed blood cells is indicated if there are: (1) signs and symptoms of congestive heart failure, (2) progressive fall in the hemoglobin level after diagnosis, or (3) a slow bone marrow response. A level of 8 to 9 gm/100 ml hemoglobin should be attained by transfusion. Higher transfusion levels may cause bone marrow suppression leading to recurrence of the anemia. Prednisone therapy is indicated as soon as the diagnosis has been made. The effective dose is 1 mg/lb/day in three or four divided doses (maximum 60 mg/day). Full doses of prednisone should be continued for at least two weeks. If the reticulocyte count remains high, the treatment time should be prolonged and tapering delayed. Occasional recurrences have been reported but these are rare. Of utmost importance in the evaluation of these patients is investigation for secondary causes of hemolytic anemia before the diagnosis of Lederer's anemia is made.

Acquired hemolytic anemias are commonly found to be secondary to specific viral illnesses. The most common of these is mycoplasma pneumonia associated with cold agglutinins of anti-I or other blood group specificities. Infectious mononucleosis may cause a hemolytic anemia with anti-I or anti-i cold agglutinins. Rarer causes of postinfection hemolysis are influenza, coxsackieviruses, measles, varicella, and cytomegalovirus infections.

2. *Acquired hemolytic anemias in childhood.*

Acute acquired hemolytic anemia (Lederer anemia)
Acute or chronic acquired hemolytic anemia associated with other diseases
March hemoglobinuria
Microangiopathic anemias: a. disseminated intravascular coagulation b. hemolytic-uremic syndrome c. thrombotic thrombocytopenic purpura d. cavernous hemangiomas
Macroangiopathic anemias: a. valve defect repairs b. prosthetic insertion of valves c. septal defect repairs
Drug-induced anemias: a. antibiotics b. alpha-methyldopa

Most of these episodes of hemolysis occur during the recovery phase of the illness and are self-limited. If, however, hemolysis is severe, corticosteroids may be used.

Collagen-vascular diseases are often associated with hemolytic anemias: systemic lupus erythematosus and rheumatoid arthritis, both the adult and juvenile forms. The treatment is aimed toward the primary disease. Hemolysis may also be found in the lymphoproliferative disorders, most commonly lymphosarcoma and Hodgkin disease. All of these cases of hemolytic anemia produce a positive Coombs reaction with Rh blood group specificity. A Coombs-positive hemolytic anemia may be the first manifestation of collagen-vascular or lymphoproliferative disorders, or both. The hemolysis is usually mild to moderate and splenomegaly is common.

Microangiopathic hemolytic anemias are caused by a large number of primary disorders. The pathophysiologic mechanism underlying them all is the mechanical breakage of RBCs, usually by fibrin. An example of this type of anemia occurs in disseminated intravascular coagulation (DIC). One must remember that DIC is a secondary phenomenon. The triggering disorder must be defined and treated to reverse the process of DIC.

Intravascular coagulation is usually triggered by tissue damage, either from direct trauma or from endotoxin release and activation of Factor XII. The coagulation pathway is thus initiated, resulting in fibrin formation. Extensive fibrin deposits cause shearing of RBCs and mechanical hemolysis. Breakdown products of fibrin inhibit the normal clotting mechanism. Thus, damage in DIC is caused by thrombosis or hemorrhage, or both.

Treatment should be aimed at the underlying cause of disseminated intravascular coagulation. If hypotension or sepsis are present, they should be treated aggressively. The use of heparin in DIC is strictly a temporizing measure, used only until control of the underlying process can be achieved.

A second microangiopathic hemolytic anemia is the hemolytic-uremic syndrome (HUS) characterized by acute thrombocytopenia, hemolytic anemia, and acute renal failure. The peak age is 3 years, but older children and young adults may be affected. The etiologic agent is not known, although nearly every case occurs one to two weeks after an episode of gastroenteritis with diarrhea. Platelet activation and deposition in renal glomerular capillaries appears to be the pathophysiologic lesion leading to localized deposition of fibrin and subsequent mechanical hemolysis and renal failure. The primary therapy in HUS is aimed at the management and correction of the renal disease. In the past, exchange transfusion or heparin, or both, have been used without good results. Reversal of platelet adhesion or deposition to damaged vascular endothelium appears to arrest the renal impairment and hemolysis and allows time for healing of the endothelial lesions. Agents which interfere with platelet function would theoretically halt this cycle at an early stage. Aspirin inhibits the release of platelet adenosine diphosphate and Persatine (dipyridamole) causes a buildup of cyclic adenosine monophosphate in the platelet, rendering it less active. These two medications used together are effective inhibitors of platelet function *in vivo*. The doses used are: aspirin, 15-20 mg/kg/day; and dipyridamole, 7.5-10 mg/kg/day; both in four divided doses. A response, indicated by stabilization of renal and hematologic status, is usually seen in 48 to 72 hours; if not, doses may be boosted by 25%. After the initial laboratory and clinical responses have occurred, medication dosages should not be decreased until results of all laboratory studies are normal and red cell fragments have disappeared from the peripheral smear. Doses are tapered gradually over a period of weeks. Renal and hemotologic dysfunction may recur if the two drugs are tapered too rapidly.

The third microangiopathic anemia is associated with cavernous hemangiomas, the Kasabach-Merritt syndrome. Most giant hemangiomas cause no problems. Occasionally there is only platelet trapping. If the hemangioma is injured, disseminated intravascular coagulation may occur. Although rarely feasible, the sim-

plest treatment is ligation or resection of the hemangioma. Radiation therapy is not recommended. Long-term anticoagulation with heparin and then Coumadin may be necessary when symptomatic coagulation or platelet defects are present.

Whether they are caused by valvular repairs, prosthetic valves, or septal defect repairs, the macroangiopathic anemias all occur in cardiac patients and are referred to as the "Waring blender syndrome." Damage to the RBCs is caused by a high-speed jet stream of RBCs against a relatively unyielding plastic or fabric foreign body, or by a ball or disc valve. Thrombocytopenia may also occur. In some cases the anemia will resolve as the patch is covered by endothelium. If this does not occur, surgical repair is the only treatment.

Drug-induced hemolytic anemias are caused by a variety of immunologic phenomena. There are only three drugs in which the mechanism of hemolysis is well known:

1. Penicillin coats the red cells. The penicillin-red cell membrane forms a hapten and causes an IgG antibody response. The antibody will bind only to the hapten and not to uncoated RBCs. The anemia caused by the cephalosporins is similar, but requires complement and other plasma proteins for hemolysis. Testing for penicillin-mediated hemolysis is relatively easy: a direct Coombs test with patient's RBCs will be positive; normal RBCs with patient's serum will be negative; and normal RBCs coated with penicillin and added to patient's serum give a positive direct Coombs test.

2. The second drug is alpha-methyldopa (Aldomet), whose mechanism of antibody response is less well understood. The drug does not coat the RBCs. Antibody formation is both dose and time related and the antibodies formed have Rh specificity. Although antibody titers may be quite high, hemolysis is rare. In these patients, the direct Coombs reaction with patient's RBCs is positive; the indirect Coombs test with the patient's serum is also positive.

3. A third type of drug-related hemolysis was first described in a patient receiving stibophen, an antimony compound used to treat schistosomiasis. Other drugs that can cause this type of hemolysis are: quinidine, quinine, PAS, phenacetin, INH, streptomycin, chlorpromazine, and tolbutamide. These drugs cause direct antibody formation without hapten formation. The drug then coats the RBC, and in the presence of complement, the RBCs may be damaged or hemolyzed.

An interesting and benign entity seen in high school athletes, long-distance runners, and military recruits after long marches is march hemoglobinuria. It has been clearly shown to be caused by trauma to the RBCs in the small vessels of the feet. No real damage other than sore feet results from this phenomenon. Nausea and fever may accompany the hemolysis. Prevention consists of wearing thick socks with soft-soled shoes or abstention from the inciting exercise.

Summary

There are a variety of disorders which manifest as hemolytic anemias. An orderly approach to the diagnosis will help the physician more accurately define and treat the illness. A complete patient history is important; many of these disorders are drug-related or are preceded by viral syndromes. The patient's age is important; certain age patterns are found in Lederer anemia and the hemolytic-uremic syndrome. A thorough physical examination may reveal signs of infection, collagen disease, hypotension, sepsis, or heart disease, all of which may lead to hemolytic anemia. After these procedures have been followed, the clinician should have a better idea of the mechanisms involved in the anemia. Certain simple laboratory tests, including a careful examination of the peripheral blood smear, should confirm the diagnosis quickly and allow a rational approach to subsequent treatment of the patient.

Kenneth A. Starling, MD, Associate Professor, Department of Pediatrics, Baylor College of Medicine, 1200 Moursund Ave, Houston, TX 77030.

Information for authors

Texas Medicine is a scientific, clinical journal published primarily for members of the Texas Medical Association. In addition, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, coming meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1905 North Lamar Blvd., Austin 78705. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Scientific Articles
Manuscripts should be typed double-spaced with ample margins on firm paper. Two copies should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

References
Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrative Material
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously Published Material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with the manuscript.

Editorials
Editorials should be prepared in the same general manner, and should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the Managing Editor and consultants.

News
News items should be sent to the Editorial Offices, 1905 North Lamar Blvd., Austin 78705.

Continuing Education, Meetings
Continuing education courses and medical meetings are listed in each issue. Information about courses should include title, sponsor, location, dates, duration, fee, how many may enroll, for whom the course is designed, teaching methods, type and number of hours credit, and name and mailing address of a person to contact.

Information about meetings should include the name of the organization, place and inclusive dates, and name and mailing address of a person to contact. Program topics and names of speakers may be included as space permits.

Material should be submitted in writing six weeks before publication; for example, information for the June issue (published June 1) is needed by April 15.

Obituaries
Obituaries of deceased TMA members are published if adequate information is received within four months of date of death. When notifying the editors of a member's death, please give the name and address of next of kin.

Policy on Columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Scientific Publication Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the Committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the Managing Editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

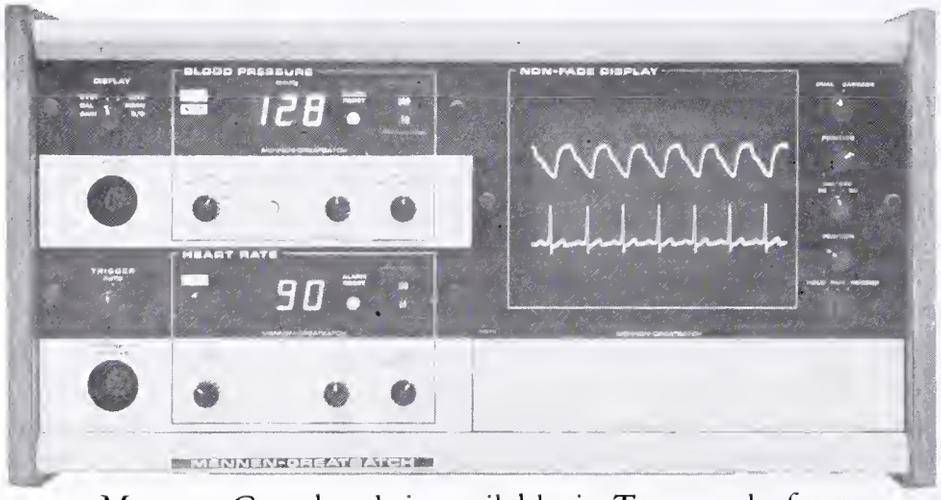
GENTEC FEATURES A TEXAS EXCLUSIVE: MENNEN-GREATBATCH CLINICAL AND DIAGNOSTIC SYSTEMS

Invest in a Mennen-Greatbatch instrument or system from Gentec Hospital Supply and you get more than the leading patient monitoring equipment.

Gentec can assist you with complete department planning and layout, system design and integration, architectural and electrical outlines, educational aids and programs.

And when your MG equipment goes to work, Gentec backs it with 24-hour service and complete warranty coverage.

See Gentec for the complete line of Mennen-Greatbatch systems, including:
Telemetry Monitoring · Microprocessors In-Patient Monitoring
Computer-Assisted Cath Lab · Data-Base Management · High-Energy Defibrillators



Mennen-Greatbatch is available in Texas only from

Gentec
HOSPITAL SUPPLY COMPANY
Division of Foremost-McKesson, Inc. *Terrell Supply Division*

FORT WORTH/DALLAS, P.O. Box 310 76101, (817) 336-8731, (214) 429-2566 / AMARILLO, P.O. Box 1587 79106, (806) 376-4696
AUSTIN, P.O. Box 4415 78723, (512) 478-2559 / LUBBOCK, P.O. Box 2913 79408, (806) 763-4655 / SAN ANTONIO, P.O. Box 32107 78216, (512) 344-0213 / HOUSTON, P.O. Box 1609 77001, (713) 237-9678

The keys to a more efficient medical practice

AMA Practice Management Publications

An efficient medical practice requires sound business management. By applying proven management techniques, you can improve the efficiency and profitability of your practice and--most important of all--have more time to devote to your patients.

These AMA Practice Management Publications, developed with the help of medical management consultants, are designed to provide you with the latest techniques and procedures in the management of your practice. Whether you are a new physician who must make immediate decisions about setting up your practice or an established physician who wants to increase the efficiency of your practice, these publications are an invaluable source.

TO ORDER: Write Order Department, American Medical Association, 535 N. Dearborn, Chicago, IL. 60610. Please specify title, OP number, and include payment with your order.

Publications

1 **The Business Side of Medical Practice** (OP-410) $2.00
Guide to basic management principles. Includes: deciding how to practice; selecting a location; setting up an office; financing; legal hurdles; insurance; mechanics of providing good medical service; billings and collections; human relations.

2 **Planning Guide for Physicians' Medical Facilities** (OP-439) $2.00
Provides guidelines and general principles to help you determine the criteria for selecting a medical office that best suits your needs. Includes: basic planning before building; office construction, inside and out; your office interior; office condominiums.

3 **Medicolegal Forms with Legal Anaysis** (OP-109) $1.25
Contains medicolegal forms, with legal analysis and citations of court decisions, for the more common interactions between patients and their physicians and hospitals, such as: consent and informed consent; patient's right to privacy; confidentiality of records; physician-patient relationship.

4 **Preparing a Patient Information Booklet** (OP-441) $.30
A guide for preparing a general information booklet for your patients on your specialty and type of practice.

5 **Talking with Patients** (OP-450) $.30
Provides proven psychological principles and specific examples on how to improve office-patient relations in telephone communications.

6 **Medical Collection Methods** (OP-448) $25.00
A "how to" cassette/workbook program designed to train medical assistants in the most effective collection techniques.
Extra Workbooks (OP-449) $2.00 each

7 **Professional Corporations in Perspective** (OP-102) $3.25
1977 publication which features: economic factors, advantages and disadvantages of incorporation; effect of ERISA on professional corporations; choosing a retirement plan; and managing a professional corporation.

8 **New Doctor's Kit** (OP-458) $10.00
Contains: **The Business Side of Medical Practice; Planning Guide for Physicians' Medical Facilities; AMA Publications Lists; Group Practice Guidelines; Current Procedural Terminology** order form; Uniform Health Insurance Claim Form; **Medicolegal Forms; Talking with Patients; Preparing a Patient Information Booklet;** AMA membership information; Placement Service; and bibliography on billing systems, recording keeping systems, etc.

9 **Group Practice Kit** (OP-457) $7.50
Contains: **Group Practice Guidelines; Professional Corporations in Perspective;** medicolegal reprints on such subjects as: professional liability, confidentiality, informed consent, etc.; samples of model legal agreements for a physician and employed associate, office sharing, medical partnerships, and forming a corporation.

"...Sleep that knits up the ravell'd sleave of care..."

— WILLIAM SHAKESPEARE, *MACBETH, ACT II, SC. 2*

Insomnia
a shade of blue that often accompanies depression

And, in anxiety/depression, Adapin® (doxepin HCl) often helps restore disturbed sleep patterns, such as early morning awakening, with a single daily dose at bedtime.[1] Adapin quickly relieves the patient's anxiety, gradually brightens his mood and outlook, with optimal antidepressant response usually evident within two to three weeks.

1. Goldberg HL, Finnerty RJ, Cole JO: Doxepin: Is a single daily dose enough? *Am J Psychiatry* 131:1027-1029, 1974

Brief Summary of Prescribing Information
ADAPIN® (doxepin HCl) Capsules

Indications—Relief of symptoms of anxiety and depression.

Contraindications—Glaucoma, tendency toward urinary retention, or hypersensitivity to doxepin.

Warnings—Adapin has not been evaluated for safety in pregnancy. No evidence of harm to the animal fetus has been shown in reproductive studies. There are no data concerning secretion in human milk, or on effect in nursing infants.

Usage in children under 12 years of age is not recommended. MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with this drug, as serious side-effects and death have been reported with the concomitant use of certain drugs and MAO inhibitors.

In patients who may use alcohol excessively potentiation may increase the danger inherent in any suicide attempt or overdosage.

Precautions—Drowsiness may occur and patients should be cautioned against driving a motor vehicle or operating hazardous machinery. Since suicide is an inherent risk in depressed patients they should be closely supervised while receiving treatment. Although Adapin has shown effective tranquilizing activity, the possibility of activating or unmasking latent psychotic symptoms should be kept in mind.

Adverse Reactions—Dry mouth, blurred vision and constipation have been reported. Drowsiness has also been observed.

Adverse effects occurring infrequently include extrapyramidal symptoms, gastrointestinal reactions, secretory effects such as sweating, tachycardia and hypotension. Weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash and pruritus may also occur.

Dosage and Administration—In mild to moderate anxiety and/or depression: 10 mg to 25 mg t.i.d. Increase or decrease the dosage according to individual response. **Usual optimum daily dosage is 75 mg to 150 mg** per day, not to exceed 300 mg per day.

Antianxiety effect usually precedes the antidepressant effect by two or three weeks.

How Supplied—Each capsule contains doxepin, as the hydrochloride: 10 mg, 25 mg and 50 mg capsules in bottles of 100 and 1000.

For complete prescribing information please see package insert or PDR.

When they see life in shades of blue... help them see life in all its colors.

Adapin®
(doxepin HCl)

single daily dose recommended h.s.

10-mg capsules
25-mg capsules
50-mg capsules

PENNWALT

Pennwalt Prescription Products
Pharmaceutical Division
Pennwalt Corporation
Rochester, New York 14603

THE ANXIETY-SPECIFIC.

- a predictable pattern of patient response
- seldom associated with serious side effects, in proper dosage
- rarely interferes with mental acuity
- used concomitantly with many primary medications
- three dosage strengths meet most patient needs

LIBRIUM® ℞

chlordiazepoxide HCl/Roche

5mg, 10mg, 25mg capsules

Libritabs® (chlordiazepoxide) available in 5 mg, 10 mg and 25 mg tablets.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in th elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported Also encountered are isolated instances o skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fas activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

Supplied: Librium® (chlordiazepoxide HC *Capsules,* 5 mg, 10 mg and 25 mg—bottle of 100 and 500; Tel-E-Dose® packages o 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containin 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) *Tablets,* 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishabl

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Please see following pag

THE ANXIETY-SPECIFIC.

Since its discovery in the research laboratories at Roche, Librium has been the object of ongoing pharmacologic and clinical investigation.

The published record on Librium is enormous. So large, in fact, we put it into a computer literature retrieval system to make it more accessible in answering your inquiries.*

It's a record that reveals a consistent pattern of patient response. A highly favorable benefits-to-risk ratio. And minimal interference with many primary medications.

Doing one thing well. Basically, that's what Librium is all about.

LIBRIUM® IV
chlordiazepoxide HCl/Roche

ROCHE

*If you have a question about Librium or any other Roche product, write to Professional Services, Roche Laboratories, Nutley, New Jersey 07110.

Please see preceding page for a summary of product information.

Evaluation of the hypertensive child

Evaluation of the hypertensive child can be logical and systematic. After blood pressures are measured and confirmed on several occasions, the history and physical examination are crucial to further investigation. If these suggest a primary cause of the hypertension, appropriate laboratory studies should be performed to confirm the etiology. If no cause is suspected, screening studies may be helpful. If results of these are normal, age, sex, perhaps race, and degree of elevation of blood pressure will determine the necessity of further procedures. This approach can prevent expensive and unnecessary evaluation.

Some concepts concerning evaluation of the hypertensive child (neonate through 19 years) have been reexamined in recent reports.[1-3] Since an elevated blood pressure in most hypertensive children has been considered to have a secondary cause,[4-8] a complete investigation was recommended to elucidate a potentially curable cause. However, this concept has been questioned.[1,2,9,10] In 1966 Londe[9] found that 95% of hypertensive children in a private practice setting had no definable etiology for their increased blood pressures. Loggie,[2] in reviewing her own data from a referral practice, found that the percentage of children with idiopathic hypertension has increased from 29 to 55% during the previous seven years. Therefore, if idiopathic hypertension accounts for a significant percentage of hypertensive children, an extensive search for a secondary cause is unwarranted. This review attempts to provide some guidelines for evaluation of the hypertensive child.

Blood Pressure Measurement and Normal Values

Before evaluation the diagnosis must be firmly established, therefore the blood pressure must be measured accurately. Many studies in infants[3,11] and children age 3 years through adolescence have shown considerable variability in blood pressure measurements.[9,12-17] These variations may be due in part to such environmental factors as pain, time after exercise or a meal, anxiety, drug therapy, fever, stress, and geographic differences.[1] Perhaps the most frequent cause of elevation is using too small a cuff. The American Heart Association recommends that the width of the inflatable cuff be approximately two-thirds of the length of the upper arm.[18] If there is any question, too long rather than too short a cuff should be used.[3] Before a patient is labeled as hypertensive, elevated measurements should be confirmed (that is, "basal" pressure determined).[18] A recent report by the AMA Joint Committee on Detection, Evaluation and Treatment of High Blood Pressure[19] recommends that blood pressure be taken twice during each visit and that the average be recorded as the "true" value. It further suggests, as we do, that before therapy is begun, blood pressure elevation be confirmed on two separate occasions. Londe and Goldring[1] suggest that if a child's initial blood pressure reading is greater than the 95th percentile, it should be measured intermittently for several months. If his initial reading is borderline (90th-95th percentile), then his blood pressure should be checked intermittently for a year before further evaluation to avoid undue anxiety for the child and parents. We, in agreement with Krovetz,[20] feel that these periods are too

Ben H. Brouhard, MD
Robert J. Cunningham, MD
Luther B. Travis, MD
Michael Berger, MD

long and that a family properly educated about hypertension—causes, variabilities, and complications—will be willing to return weekly for accurate "basal" blood pressure measurements.

Since the extent of the evaluation depends on the degree of elevation, the child's blood pressure must be related to normals for that age. Normal blood pressures[5,9,21,22] for various age groups are listed in Fig 1. Once the baseline blood pressure has been obtained, accurately and repeatedly, and compared to normals, the physician must determine the presence of hypertension.

Loggie[5] suggests that children with blood pressure in the 90th-95th percentile range are "borderline" hypertensives, perhaps at risk for later development of sustained hypertension. She further states that any child under 20 years of age with a diastolic pressure of 90 mm Hg or greater is definitely hypertensive. This criterion would reduce the number of children in the definitely hypertensive group when compared with the criteria of others. Rance and coworkers[23] suggest that a blood pressure below the 95th percentile is acceptable, while a value above this level is dangerous. Londe and Goldring[1] recommend that blood pressures between the 90th and 95th percentiles be considered with suspicion, and those above the 95th as hypertensive. We also suggest that those children with consistent pressure recordings in the 90th-95th percentile range be singled out for special consideration. Although no extensive evaluation may be necessary, we think that frequent blood pressure monitoring (at least every six months) is mandatory, especially if a risk factor such as obesity[24] or a family history of hypertension is present.[25] This recommendation is prompted by the findings of Loggie[2] and Heyden.[24] Of adolescents with "borderline" elevations who were followed for three years, 35.5% became normotensive and 49% remained at borderline levels, while 15.5% progressed to definite hypertension.[2] In a seven-year follow-up study of a similar group of 30 patients, Heyden[24] found that 12 were normotensive ($<$140/90) and 7 were still borderline (160-140/94-90), while 5 had asymptomatic sustained hypertension ($>$ 160/95), 3 had cardiovascular and cerebrovascular disease with sustained hypertension, 1 had hypertensive cardiovascular disease, and 2 were dead from cerebrovascular hemorrhage. Therefore, although laboratory evaluation of children with borderline hypertension may be unnecessary, close follow-up is extremely important.

The degree of elevation greatly determines the evaluation procedure. The higher the pressure the more likely is a secondary cause, and the more aggressive the investigation should be. Another determining factor is age—although idiopathic hypertension has been reported in neonates,[26] the lower the age the more likely is a secondary cause.[2] Conversely, in adolescents idiopathic hypertension is more likely.

Evaluation of History

After the blood pressure has been measured and the relative degree of elevation determined, the evaluation can proceed (Fig 2). The two most important studies are a thorough history (including family

1. Guidelines for upper limits of normal blood pressure for various age groups.[5,9,21,22]

Age Groups, Male and Female	95 Percentile	
	Systolic	Diastolic
0-3	110	65
3-7	120	70
7-10	130	75
10-15	140	80

history) and a physical examination. These will help to elucidate etiology, identify risk factors, and suggest the duration of hypertension. A history of a normal blood pressure is particularly useful in determining duration. Specific aspects of the history to be identified include: recurrent urinary tract infections, hematuria, trauma to the abdomen or flank, weight gain, umbilical artery catheter in a neonate[27] (renal etiology); episodes of excess sweating, palpitations, weight loss (catecholamine excess); muscle weakness, paresthesias, tetany, easy bruising (steroid excess); drug ingestion (birth control pills, licorice, steroid, vitamin D intoxication); pica (lead intoxication), and head trauma. Risk factors include: lipid abnormalities, renal disease, stroke, excessive salt intake, a family history of hypertension,[25] and obesity.[17,24] The last two may be particularly important for children with borderline hypertension. Heyden and coworkers[24] found that a weight change was the only decisive factor for determining whether a pressure increase would evolve into sustained hypertension. Symptoms of hypertension—headaches, blurred vision, expistaxis—are non-specific. However, if persistent, they may help define the duration of hypertension.

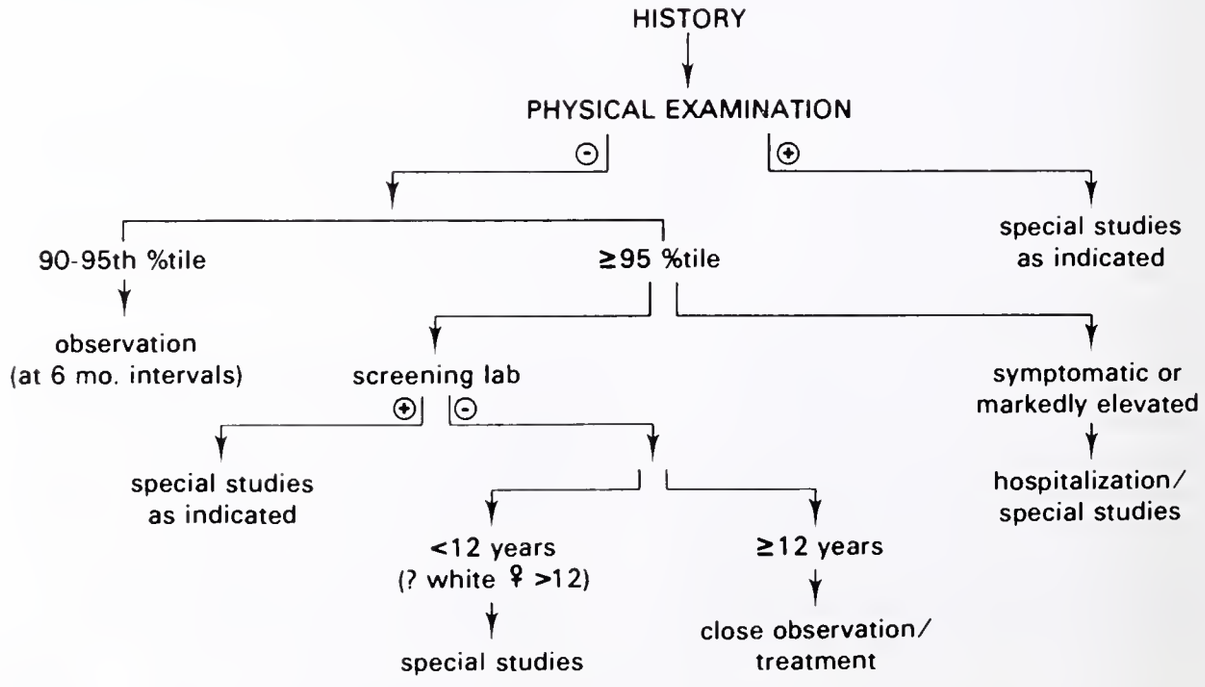
Evaluation of Physical Examination

Physical features which should be noted particularly include: femoral pulses and blood pressure in the legs (coarctation); abdominal bruit (renovascular hypertension); *cafe au lait* spots, cutaneous neurofibromas (pheochromocytoma, renovascular hypertension); tachycardia, pallor, flushing (pheochromocytoma); positive Chvostek or Trousseau sign, tetany, muscle weakness, truncal obesity, buffalo hump, moon facies, hirsutism, purple striae (Cushing syndrome, steroid ingestion); flank mass (hydronephrosis); costovertebral angle tenderness (pyelonephritis); bone deformities and growth retardation (chronic renal failure). Funduscopic examination to evaluate arteriolar damage directly may suggest duration of blood pressure elevation.

Laboratory Investigation

If a secondary cause of hypertension is suggested by the history and physical examination, appropriate laboratory studies should be performed. If, however, no evidence of a primary disease is obtained, then the physician must consider the previously mentioned factors of degree of elevation, age, and perhaps sex and race as guidelines (Fig 2). The commonest

2. Evaluation of children with persistent hypertension.



cause of hypertension in children is renal disease[6]—renovascular or renal parenchymal. An initial screening evaluation should include a urinalysis for evidence of renal involvement (protein, red blood cells, white cells) and a urine culture. An estimation of renal function—values for creatinine or blood urea nitrogen, or both—should be obtained. Anatomic evaluation of the kidneys can be made with an excretory urogram. This study can provide some estimate of differential renal blood flow to each kidney by evaluating intensity of dye and time of excretion. If there is a question as to disparity of flow, urea washout[28] or renograms may be useful; the latter detects 80% of patients with renovascular hypertension.[7] The renal parenchyma also can be evaluated for scarring (which may suggest chronic infection), cysts, obstruction, unilateral disease,[29] and segmental hypoplasia (Ask-Upmark kidney).[30] Further studies include a peripheral plasma renin measurement, roentgenogram of the chest, and electrocardiogram. The latter two studies provide baseline data and an assessment of target organ damage. If no medications have been prescribed and salt intake has been reasonably constant, measurement of peperipheral plasma renin (supine and upright) is of value. If the plasma renin level is above normal for age[31] and for the concomitant salt intake,[32] renovascular hypertension is suggested as a secondary cause; if low, with minimal to no response to posture, hyperaldosteronism is suggested. If, however, the renin values are normal and respond appropriately to posture, then other factors (age, sex, race) determine further evaluation.

Since a secondary cause for hypertension is more likely in the younger child (under age 12), a thorough evaluation may be initiated once an elevated pressure is confirmed. Studies would include urinary 17-hydroxy- and 17-ketosteroids, T_4, urinary catecholamines, and arteriography with bilateral renal vein renins. A blood pressure increase during puberty (age 10-14) has been considered secondary to sexual maturation and therefore of little clinical significance.[14,33] However, in a recent study, Londe and coworkers[34] found no correlation between sexual development and blood pressure, and concluded that hypertension in this age group is not a physiologic response but a finding that deserves careful monitoring. Loggie[2] suggests that the adolescent white girl, in addition to the younger child, deserves a thorough evaluation (Fig 2). In her experience, such patients have an increased incidence of secondary hypertension. However, if the patient is an adolescent black or white boy or black girl, idiopathic hypertension is more likely and only the initial screening studies are indicated. Such studies as urinary catecholamines and aortography probably are unwarranted.

Other Indications for Evaluation

If the patient's blood pressure is markedly elevated (greater than 15 mm Hg above the 95th percentile or greater than 110 mm Hg in the adolescent), immediate hospitalization with aggressive evaluation is indicated. Mitchell and associates[3] also recommend such treatment in patients with localizing neurologic signs, severe renal or abdominal pain, blurred vision, retinal hemorrhage and exudates, papilledema, congestive heart failure, sudden decrease in renal function, and abdominal bruits or masses. Even when the cause is transient (for example, acute glomerulonephritis), hospitalization is indicated for blood pressure control.

Although this article has been concerned principally with diastolic hypertension, systolic hypertension (greater than 95th percentile) also deserves attention. The build and blood pressure study demonstrated that the systolic blood pressure is at least as important a risk factor as the diastolic pressure.[35] At any level of diastolic pressure, mortality increased with each increment in systolic pressure. The Framingham study reemphasized the importance of systolic blood pressure as a risk factor in stroke,[36] coronary artery disease,[37] and congestive heart failure.[38] Although disproportionate or isolated systolic hypertension [systolic pressure greater than $2(P_d\text{-}15)$][39] may reflect the

degree of atherosclerotic changes in large arteries, which is admittedly uncommon in pediatric populations, such an elevation should not be dismissed. We agree with Koch-Weser[39] that isolated or greatly disproportionate systolic blood pressure merits evaluation along the same guidelines as diastolic hypertension.

Conclusion

The evaluation of the hypertensive child can be approached with logic and order. The diagnosis must be unequivocally established by measuring the blood pressure accurately and confirming the measurement on several occasions. The degree of elevation and age of the patient are principal determinants of the evaluation. If history, physical examination, and screening laboratory data give no evidence of a primary cause, then age, sex, and race may determine the extent of further evaluation.

References

1. Londe S, Goldring D: High blood pressure in children: problems and guidelines for evaluation and treatment. Am J Cardiol 37:650-657, 1976.

2. Loggie JM: Hypertension in children and adolescents. Hosp Pract 10(6):81-92, 1975.

3. Mitchell SC, Blount SG Jr, Blumenthal S, et al: The pediatrician and hypertension. Pediatr 56:3-5, 1975.

4. Singh SP, Page LB: Hypertension in early life. Am J Med Sci 253:255-262, 1967.

5. Loggie JM: Hypertension in children and adolescents. I. Causes and diagnostic studies. J Pediatr 74:331-335, 1969.

6. Olson DL, Lieberman E: Renal hypertension in children. Pediatr Clin N Amer 23:795-805, 1976.

7. Blaufox MD: Systemic arterial hyptertension in pediatric practice. Pediatr Clin N Amer 18:577-593, 1971.

8. Daeschner CW Jr: Arterial hypertension in infancy and childhood. Etiologic factors and management. Am J Cardiol 9:904-907, 1962.

9. Londe S: Blood pressure in children as determined under office conditions. Clin Pediatr 5:71-78, 1966.

10. Londe S, Bourgoignie JJ, Robson AM, et al: Hypertension in apparently normal children. J Pediatr 78:569-577, 1971.

11. Lee YH, Rosner B, Gould JB, et al: Familial aggregation of blood pressures of newborn infants and their mothers. Pediatr 58:722-729, 1976.

12. Hahn L: The relation of blood pressure to weight, height and body surface area in school-boys age 11 to 15 years. Arch Dis Child 27:43-53, 1952.

13. Johnson BC, Epstein FH, Kjelsberg MO: Distributions and familial studies of blood pressure and serum cholesterol levels in a total community. Tecumseh, Mich. J Chronic Dis 18:147-160, 1965.

14. Weiss NS, Hamill PVV, Drizd T: Blood pressure levels of children 6 to 11 years: relationship to age, sex, race and socioeconomic status. Vital and Health Statistics. Series II, No 135, (Dec) 1973.

15. Graham AM, Hines EA Jr, Gage RP: Blood pressures in children between the ages of 5 and 16 years. Am J Lis Child 69:203-207, 1945.

16. Lauer RM, Connor WE, Leaverton PE, et al: Coronary heart disease risk factors in school children: the muscatine study. J Pediatr 86:697-706, 1975.

17. Voors AW, Foster TA, Frerichs RR, et al: Studies of blood pressures in chidlren, ages 5-14 years, in a total biracial community. The Bogalusa heart study. Circulation 54:319-327, 1976.

18. Kirkendall WM, Burton AC, Epstein FH, et al: Recommendations for human blood pressure determination by sphygmomanometers. Circulation 36:980-988, 1967.

19. Moser M, Guyther JR, Finnerty F Jr, et al: Report of the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure. JAMA 237:255-261, 1977.

20. Krovetz LJ: Blood pressure (editorial). J Pediatr 87:1013-1014, 1975.

21. Long M, Dunlop JR, Holland WW: Blood pressure recording in children. Arch Dis Child 46:636-640, 1971.

22. Moss AJ, Adams FH: Problems of blood pressure in childhood. Springfield, Ill, Charles C Thomas Publishers, 1962.

23. Rance CP, Arbus GS, Balfe JW, et al: Persistent systemic hypertension in infants and children. Pediatr Clin N Amer 21:801-824, 1974.

24. Heyden S, Bartel AG, Hames CG, et al: Elevated blood pressure levels in adolescents. Evans County, Georgia. JAMA 209:1683-1689, 1969.

25. Zinner SH, Levy PS, Kass EH: Familial aggregation of blood pressure in childhood. N Engl J Med 284:401-404, 1971.

26. Plumer LB, Mendoza SA, Kaplan GW: Hypertension in infancy: the case for aggressive management. J Urol 113:555-557, 1975.

27. Plumer LB, Kaplan GW, Mendoza SA: Hypertension in infants—a complication of umbilical artery catheterization. J Pediatr 89:802-805, 1976.

28. Scheiber MH, Sarles HE, Herring ME, et al: The pyelogram-urea washout tests. Its value in the diagnosis of renovascular hypertension. N Enyl J Med 270:1223-1227, 1964.

29. Haycock GB: Hypertension associated with unilateral renal disease in childhood. Report of two cases and review of the literature. Acta Paediatr Scand 64:299-304, 1975.

30. Mozziconacci P, Attal C. Boisse J, et al: Hypoplaisie sepmentaire du rein avec hypertension arterielle. Ann Pediatr 15:337-351, 1968.

31. Stalker HP, Holland NH, Kotchen JM, et al: Plasma renin activity in healthy children. J Pediatr 89:256-258, 1976.

32. Laragh JH: Vasoconstriction-volume analysis for understanding and treating hypertension: the use of renin and aldosterone profiles. Am J Med 55:261-274, 1973.

33. Shock NW: Basal blood pressure and pulse rate in adolescents. Amer J Dis Child 68:16-22, 1944.

34. Londe S, Johanson A, Kronemer NS. et al: Blood pressure and puberty. J Pediatr 87:896-900, 1975.

35. Society of Actuaries: Build and blood pressure study. Chicago, Society of Actuaries, 1959.

36. Kannel WB, Wolf PA, Verter J, et al: Epidemiologic assessment of the role of blood pressure in stroke; the Framingham study. JAMA 214:301-310, 1970.

37. Kannel WB, Gordon T, Schwartz MJ: Systolic versus diastolic blood pressure and risk of coronary heart disease; the Framingham study. Am J Cardiol 27:335-346, 1971.

38. Kannel WB, Castelli WP, McNamara PM, et al: Role of blood pressure in development of congestive heart failure; the Framingham study. N Engl J Med 287:781-787, 1972.

39. Koch-Weser J: Correlation of pathophysiology and pharmacotherapy in primary hypertension. In Laragh JH, Ed: Hypertension manual. New York, Dun-Donnelley, 1974, pp 759-786.

Ben H. Brouhard, MD; Robert J. Cunningham, MD; Luther B. Travis, MD; and Michael Berger, MD, Department of Pediatrics, Division of Nephrology, The University of Texas Medical Branch, Galveston, TX 77550.

Reprint requests to Dr. Brouhard.

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

TEXAS REPRESENTATIVES

A. F. Ennis, Jr. and B. C. Crim, Suite 210, 712 N. Woshington, Dallos 75246	Telephone (214) 821-4640
W. L. Kirk, 1508 Hermann Prof. Bldg., Houston 77030	Telephone (713) 797-9835
M. C. Rollons, 408 GPM Bldg., South Tower, Son Antonio 78216	Telephone (512) 344-5901

KELSEY-SEYBOLD CLINIC

TEXAS MEDICAL CENTER ● 6624 FANNIN STREET ● HOUSTON, TEXAS 77030 ● AC (713) 797-1551

INTERNAL MEDICINE

Allergy
C. W. Ewing, M.D., F.A.C.A.
S. Weakley, M.D.

Arthritis and Rheumatic Diseases
J. W. Kemper, M.D., F.A.C.P.
M. S. Fischer, M.D.

Cardiology
E. F. Beard, M.D., F.A.C.P.
D. D. Goulden, M.D.
M. J. Mihalick, M.D.

Endocrine and Metabolic Diseases
M. P. Kelsey, M.D., F.A.C.P.
A. E. Leiser, M.D., F.A.C.P.
P. K. Champion, Jr., M.D., F.A.C.P.

Gastrointestinal Diseases, Endoscopy
J. R. Kelsey, Jr., M.D., F.A.C.P.
P. S. Bentlif, M.D., F.A.C.P.
R. D. Elchhorn, M.D., F.A.C.P.
F. S. O'Neil, M.D., F.A.C.P.
J. W. McBee, M.D., F.A.C.P.

General Internal Medicine
G. E. Burke, M.D.
C. F. Taboada, M.D., F.A.C.P.
N. H. Nauert, Jr., M.D.
G. G. Bourianoff, M.D.
G. Crofoot, M.D.

Hematology
J. B. Bart, M.D., F.A.C.P.

Infectious Diseases
S. Riggs, M.D., F.A.C.P.

Nuclear Medicine
D. E. Mouton, M.D., F.A.C.N.M.

Oncology
E. N. Root, M.D.

Pulmonary Diseases, Bronchoscopy
S. P. Fischer, M.D., F.A.C.P.
B. D. Walker, M.D.

DERMATOLOGY

W. M. Fraser, M.D., F.A.A.D.
D. W. Owens, M.D., F.A.A.D.

GENERAL & THORACIC SURGERY

Surgical Endoscopy & Colonoscopy
W. D. Seybold, M.D., F.A.C.S.
J. D. McMurrey, M.D., F.A.C.S.
J. L. Doggett, M.D., F.A.C.S.
M. F. Appel, M.D., F.A.C.S.

OBSTETRICS & GYNECOLOGY

M. L. Cody, M.D., F.A.C.S., F.A.C.O.G.
W. A. Johnson III, M.D., F.A.C.O.G.
A. G. Guette, M.D.

OCCUPATIONAL & PREVENTIVE MEDICINE

M. B. Johnston, M.D., F.A.C.Pr.M.
W. B. Dye, M.D., F.A.C.Pr.M.
H. B. Elwell, Jr., M.D.
R. M. Fenno, M.D., F.A.C.P.
F. A. Goss, M.D.
W. R. Hawkins, M.D., F.A.C.Pr.M.
W. R. Heln, M.D., F.A.C.Pr.M.
L. A. Herrmann, M.D.
G. F. Kelly, M.D., F.A.C.Pr.M.
C. A. Owen, M.D., F.A.C.S.
B. W. Prior, M.D., F.A.C.Pr.M.
N. A. Tadros, M.D., F.A.C.Pr.M.
A. M. Wyss, M.D., F.A.C.Pr.M.
R. J. Huebner, M.D.
T. K. Lee, M.D., M.P.H.

OPHTHALMOLOGY

H. E. Wahlen, M.D., D.A.B.O.
J. E. Key, II, M.D., D.A.B.O.

ORTHOPEDIC SURGERY

R. A. Fulford, M.D., F.R.C.S. (C)
T. H. Crouch, M.D., F.A.C.S.

OTOLARYNGOLOGY

J. C. Dickson, M.D., F.A.C.S.
J. L. Smith, M.D., F.A.C.S.
L. P. Conrad, M.D.

PATHOLOGY

R. A. Jordan, M.D., F.A.S.C.P.

PEDIATRICS

Rheumatology
E. J. Brewer, Jr., M.D., F.A.A.P.

Allergy and Pulmonary Diseases
C. W. Ewing, M.D., F.A.A.P.

Gastroenterology
G. D. Ferry, M.D., F.A.A.P.

General Pediatrics and Consultation
F. J. Boland, M.D., F.A.A.P.
R. M. Thaller, M.D., F.A.A.P.
K. C. Pinckard, M.D.

PSYCHIATRY

C. G. Cochran, M.D.
R. Dalchman, M.D.

RADIOLOGY

R. J. Kurth, M.D., F.A.C.R.
E. G. Linares, M.D.
P. Raphael, M.D.
T. P. Connolly, M.D.

UROLOGY

D. W. Pranke, M.D., F.A.C.S.
F. M. Fry, M.D.

DENTISTRY

J. W. Orr, D.D.S.
D. L. McClung, D.D.S.

SPEECH PATHOLOGY & AUDIOLOGY

D. R. Fox, Ph.D.
J. W. Porter, M.A.
N. Shulak, M.A.

EXECUTIVE DIRECTOR

J. A. Bakken, F.A.C.M.G.A.

K-S WEST

1111 Augusta Drive
Houston, Texas 77057
(713) 780-1661

K-S DOWNTOWN

Two Houston Center, Suite P-310
909 Fannin Street, Houston, Texas
77002 (713) 654-4401

Exercise prescription for young women

Joel Rosentswieg, EdD

Comparison of a number of possible exercise programs indicates that the proper prescription must include a threshold intensity (60% maximum heart rate), a daily dosage, and a moderate duration to improve fitness during a two-month period. Exercise prescriptions for young women are often too low to be of obvious benefit in a short enough time to encourage patients to continue.

Exercise prescription components generally are considered to be the basic level of fitness, intensity of the activity, duration, and frequencey of participation.[4] Alteration of these variables determines the physiological values of exercise. Significant changes in the fitness of young adults, measured by oxygen consumption, measured in milliliters per kilograms of body weight per minute (VO_2 ml/kg/min), have been reported by different investigators using variations of the basic components.

According to the literature, intensity is the factor most often varied, yet the results are frequently contradictory. Most of the studies found in the literature have used young athletic men as subjects. When women are the focus of an investigation involving exercise, they have typically been "highly fit" volunteer subjects.

During the past ten years, hundreds of young women have been tested on a variety of fitness factors in the Human Performance Laboratory of the College of Health, Physical Education, and Recreation at Texas Woman's University.

We have used almost every combination of the basic prescriptive factors reported by other investigators and have noted that only the most rigorous prescriptions are consistently effective. Unfortunately, young women (or any other age/sex group) do not readily engage in highly stressful physical activities on a voluntary basis for prolonged periods.

Program and findings

A previously reported study[5] maintained a constant duration of work or amount of total work, or both, and varied the intensity from minimal levels that have been reported to produce significant improvement in oxygen consumption (heart rate 120 beats per minute) to above the Karvonen formula of 60% of the age-predicted maximum heart rate.[3]

The subjects were women ages 18-24 who did not chronically engage in vigorous activity. Caloric consumption was not monitored, but the subjects were asked not to increase previous amounts. The program of controlled exercise on a treadmill lasted for one month and the frequency was three times per week. The treadmill grade was maintained at 1% while the speed was regulated by a Quinton Heart Rate Controller to insure constant intensity. The subjects worked for either 15 minutes at the prescribed intensity or for a duration determined by the intensity to cover a set distance (approximately 1.6 km, or one mile). Measures of oxygen consumption at a heart rate of 180 beats per minute (VO_2 180) before and after the test were low and did not change significantly. The subjects were of such low levels of fitness that even those subjects who worked at 60% of their maximum levels met the load by walking, not jogging or running!

When the program was repeated during a two-month period, the results remained virtually the same. The only difference noted was a slight but insignificant loss in body weight for the most intense exercise group. When the same work was

done daily (five times a week) positive changes in the oxygen consumed at a heart rate of 180 beats per minute were noted at one month and significant changes occurred by the end of the second month. When the duration of daily work was doubled (30 minutes) at an intensity requiring the heart rate to be 140 or 160 beats per minute, the oxygen consumption when measured at the end point of 180 beats per minute increased significantly. These subjects had to jog rather than walk by the end of the second week. An oxygen consumption of 42 ml/kg/minute is often accepted as a point defining good aerobic fitness.[1] Only the most intense exercise program studied achieved this point in two months of activity (Fig 1).

Implication

The results of these studies suggest that an exercise prescription of walking or even jogging one mile three times per week for young women who are inactive and not self-disciplined probably will not produce improvement visibly or by self-determined physiological changes soon enough to make the subject believe the effort is worth the trouble.

A program of exercise demanding an intensity of a 160 heart rate for a duration of one-half hour five times per week is not too severe for those who are motivated to exercise. For those individuals who are not motivated to exercise, the prescription may have to be lower initially with adjustments made as soon as possible to obtain the physiological benefits of physical activity.

As with any treatment, there is a need for a test of fitness status before any exercise is prescribed and continual monitoring so the prescription can be altered to meet individual needs. From the point of view of the exercise physiologist, physical activity frequently appears to be prescribed like a patent medicine and as such it is only as good as any other nostrum.

References

1. Balke B, in: Spector H, Brozel J, et al (Eds): Performance capacity, National Research Council, 1961, pp 13-19.

2. Durnin JV, Brockway JM, Whitcher HW: Effects of a short period of training of varying severity on some measurements of physical fitness. J Appl Physiol 15:161-165, 1960.

3. Karvonen M, Kentala E, Mustala O: The effects of training on heart rate; a longitudinal study. Ann Med Exp Biol Fenn 35:307-315, 1957.

4. Pollock ML, in: Wilmore J (Ed): Exercise and sport sciences reviews. Academic Press, 1973, vol 1, pp 155-188.

5. Rosentswieg J, Burrhus P: An investigation of the intensity of work required to elicit a training effect in women. J Sport Med Phys Fitness 15:328-332, 1975.

Joel Rosentswieg, EdD, Texas Woman's University, PO Box 23717, TWU Station, Denton, TX 76204.

1. Descriptive data of the two-month exercise program.

Program	No. Subjects	Mean Age	Average VO_2 180 ml/kg/min Pretest	Midtest	Posttest
15 min 3 X wk HR 160	6	19.4	30.31	31.13	31.87
30 min 3 X wk HR 140	5	19.4	32.37	34.77	36.84
30 min 3 X wk HR 160	6	19.5	31.57	34.81	37.25
15 min 5 X wk HR 140	6	19.5	31.76	33.28	36.10
15 min 5 X wk HR 160	6	19.6	32.48	34.96	38.43
30 min 5 X wk HR 140	6	19.2	33.05	36.66	40.75
30 min 5 X wk	5	19.6	32.42	37.00	42.53

Texas Medical Association considers reorganization plan

A major plan to reorganize the Texas Medical Association will be considered by the TMA House of Delegates during meetings Nov 12 and 13 in Austin.

The TMA Executive Board has adopted a report of the Ad Hoc Committee to Study the Association's Organizational Structure and Function.

Background

In addressing the broad responsibility of reorganization, the TMA Executive Board appointed the Ad Hoc Committee to Study the Association's Organizational Structure and Function. Members of the committee were Joseph T. Painter, MD, chairman, Charles Max Cole, MD, Sheridan S. Evans, MD, Ben R. Keller, Jr, JD, Sam N. Key, Jr, MD, A. Rex Kirkley, MD, and Travis Smith, MD.

To conduct the study, the committtee established certain organizational principles, defined the problems facing the Association, identified the functions which the Association should perform to meet present day problems, grouped those functions into structural areas, and compared the needed organizational units with present Association structure.

The committee's goal was to present the best plan for a strong effective Association to represent the practicing physicians in Texas in today's world unencumbered by tradition. Every area of the Association was studied. The changes recommended in the report require extensive amendment to the TMA Constitution and Bylaws.

The Committee to Study the Association's Organizational Structure and Function met in February, March, April, May, and twice in July to develop the report. The study encompassed approximately 700 hours of professional time and an inestimable number of hours by staff.

The committee interviewed the chairman of the Board of Trustees, the president, the president-elect, and the TMA executive staff. Meetings also were held with the council chairmen and their staff to learn of present activities and to receive suggestions for change. A survey of the House of Delegates provided added scope.

Tentative conclusions were presented to the Executive Board and to council representatives as a final step before preparation of the final report.

Multiple analyses were prepared as a part of the study: projections on the future environment, a conceptual model of TMA, the planning process, definition of the problems facing medicine, organization weaknesses, and principles for a strong organization.

The study also was assisted by staff reports and projections on numerous specific subjects within current TMA operations. These included reports on the organizational structures of other large state medical associations and the AMA, membership, legal-legislative-lobbying alternatives, finances, facilities and staff resources.

Recommendations

Major recommendations of the report include establishment of a single Board. The Executive Board recommends that the functions of the Executive Board and the Board of Trustees be combined, that the new Board be composed of 13 voting and 2 nonvoting ex officio members; that the at large members be elected by an at large election procedure without slotting and that the terms and tenure of office be shortened.

The report also recommends a change in the council structure to organize along functional lines.

The Executive Board recommends that the council structure be realigned and reorganized following the 1978 Annual Session into six major areas: Socioeconomics, Medical Education, Health Affairs, Health Facilities, Legislation, and Constitution and Bylaws.

Realignment of present committees by new councils and subsequent designation of a new committee structure is recommended.

Transitional realignment of present committees under the new councils is recommended following the 1978 Annual Session; assessment of the need for committees by the individual councils; and, during 1978-1979, designation of new committees as recommended by the councils and approved by the new Board.

The Executive Board recommends the development of a pool of trained physician and staff negotiators and outlines the mechanism for authorization of negotiations and policy guidance during the course of negotiations.

The Executive Board also recommends that the staff support provided the volunteer physicians be increased, and calls for the study of the feasibility of an inhouse legal department, and endorsement of the

Major Reorganization Recommendations

1. Establishment of a single Executive Board
2. A change in council structure to organize along functional lines
3. Realignment of present committees by new councils and subsequent designation of new committee structure
4. Development of trained physicians and staff negotiators
5. Increase in staff support
6. Definition of relationships with other organizations
7. Enhancement of membership recruitment and retention programs
8. Enhancement of fiscal management procedures
9. Approval of an incremental scheduled dues increase
10. Approval of an operational plan by council

principle of a full-time physician chief executive officer.

Definitions of appropriate relationships with medical specialty societies, Texas Medical Foundation, Texas Institute for Medical Assessment and other organizations are recommended by the board. Liaison relationships within and without the Association also are defined by objective and by council.

An intensified recruitment for resident physicians and medical students and staff assistance to county medical societies for membership retention, as recommended by the Executive Board.

Recommended also are enforcement of the policy on fiscal notes for all proposals which require funds or staff, program and zero-based budgeting, allocation of resources by priority, and long range fiscal planning by the new Board.

In the report, the Executive Board recommends the approval of an incremental scheduled dues increase.

The board recommends an annual dues increase of 10% of the current 1977 dues base be approved for a three year period to offset inflation and cost of living increases as well as to permit limited program and staff expansion.

Implementation

To facilitate consideration of recommendations approved by the Executive Board, the Council on Constitution and Bylaws has prepared specific language changes for all recommendations requiring constitutional change.

The report of the Executive Board, and the accompanying Constitutional language changes, are included in the Delegates Handbook for consideration at the Interim Session of the House of Delegates in November.

Preparation of amendments to the Bylaws would follow any action taken by the House of Delegates and would await consideration at the 1978 Annual Session.

The implications of action taken by the House of Delegates would be to initiate an orderly change in organization following the 1978 Annual Session. According to the Executive Board, decisions reached in November 1977 will be critical as they will necessitate extensive planning by the president-elect, Board of Trustees, and staff to effect an orderly transition during and following the 1978 Annual Session. Implementation of the Executive Board's recommendations would be completed by 1979.

House of Delegates Survey

The Ad Hoc Committee recognized that the Association's House of Delegates was an important source of information for its study. On July 1, the members of the House were mailed a questionnaire.

Of the 469 delegates, alternate delegates and ex officio members, 72% completed and returned questionnaires by Aug 10.

The delegates were asked questions about TMA policy making, working structure, program structure, financial structure, and priorities.

The delegates voted for representation of practicing physicians, legislation-lobbying, medical education, communications with the profession and the public, and negotiations for physicians members as top TMA priorities.

Other priorities include scientific policy, socioeconomic representation, member services, public health, and practice management.

Timetable for Review of Report

and Implementation of Approved Recommendations

Date/Time Period	Activity	Responsibility of/ Action by
Friday, November 11 8:00 P.M.	House of Delegates special hearing on the report	Executive Board
Saturday, November 12	Special Reference Committee conduct hearing on the report and required Constitutional amendments	Reference Committee
Sunday, November 13	Action on the *Reference Committee's* report (covers recommendations and Constitutional amendments which would then lay on the table until May, 1978).	House of Delegates
November— mid-January	Preparation of required Bylaws amendments	Council on Constitution and Bylaws
March-April	Consideration of physicians for appointment to (present) committees and for nomination for election to (new) Councils	President-elect
March-April	Individuals determine candidacies for elected offices	Candidates for officer positions, the (new) Board of Trustees, and Tex. Delegation to the AMA
About April 1	Handbook containing Bylaws and Constitutional amendments mailed to House of Delegates	Staff
May 11-12 TMA Annual Session	Action on *Reference Committee* report containing report recommendations and required amendments to both the Constitution and Bylaws	House of Delegates
May 13 (Last day of Annual Session)	Election of officers, members of (new) Councils, and members of the (newly constituted) Board of Trustees	House of Delegates
May-June	Appointment of physicians to serve on (present) committees for May 1978-April 1979 term	President-Elect
June, 1978-May, 1979	Board of Trustees internal reorganization; (new) Council and Board of Trustees assessment of needed committee structure (with continuation of present committees until action taken); President's committee appointments as necessary; development of Council programs, activities, etc.	(new) Board of Trustees; (new) Councils
May, 1979 Annual Session	Transition to new organization complete	

A majority of those responding felt that the size of the House of Delegates is appropriate and that smaller county medical societies are adequately represented.

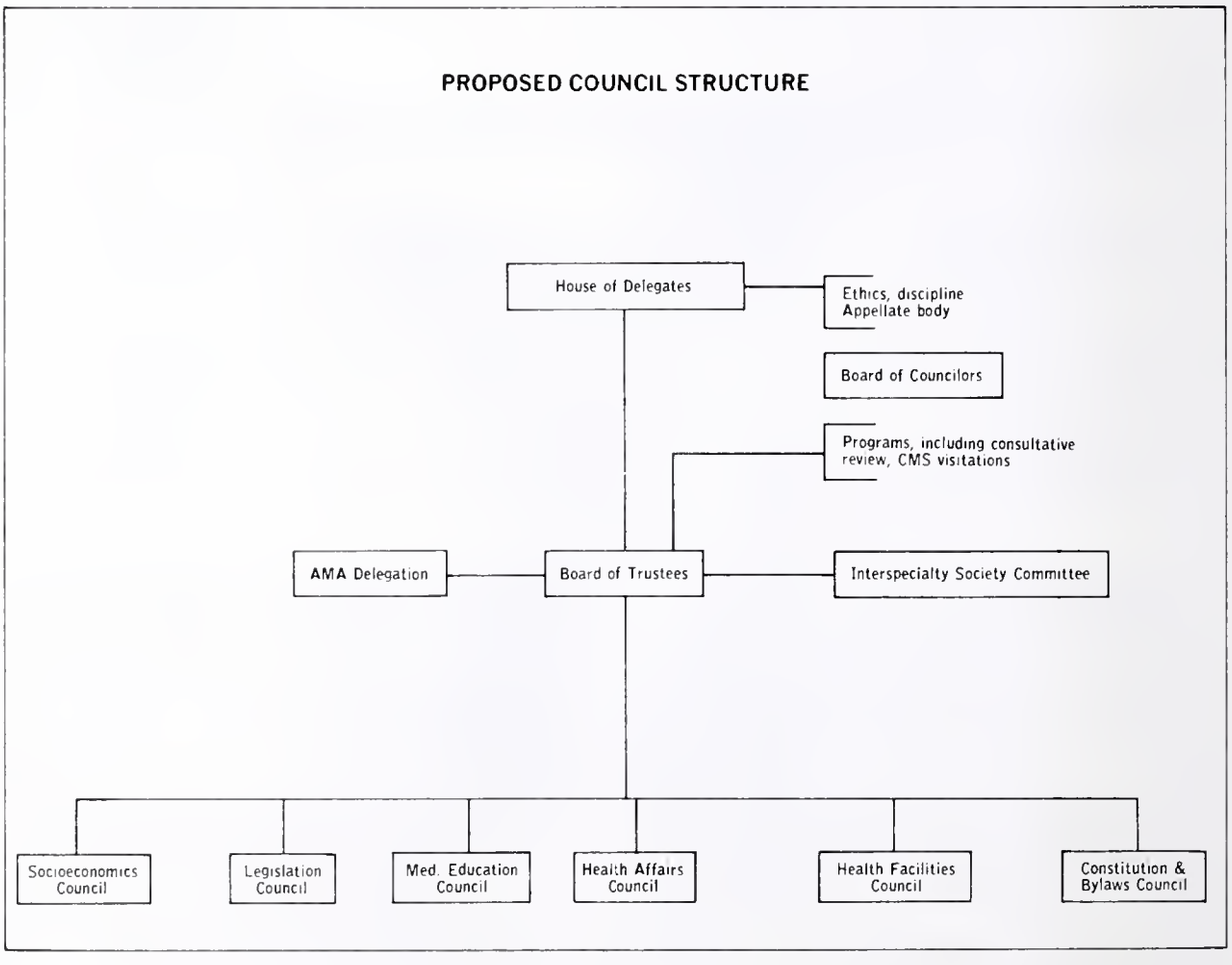
Two hundred fifteen members felt that nominations for elected offices should be made by those choosing to run (present system), while 96 felt the TMA should adopt a nominating committee structure.

A majority of those responding voted that TMA has an appropriate number of councils and committees to function as an organization. More than 300 voted for the use of ad hoc committees or task forces for special problems.

More than 200 delegates said the emphasis by TMA on medical education is about right, and 188 physicians said the major effort of the TMA in medical education should be directed at the continuing medical education level.

Two hundred eighty-three physicians said the TMA should take a more aggressive role in negotiating with government and third parties regarding problems affecting the practicing physician.

More than 200 physicians favor periodic dues increases to meet the need for expanded activities and programs.



Lifesaving Partnership... Against Cancer Quackery

The anguish associated with cancer is compounded by the cancer quack. False hopes—harmful delays—devastating expenses—deceptive diagnoses—loss of life—these are hazards facing the cancer patient desperate enough to seek a cancer quack.

The problem: how to divert the patient from this tragic encounter.

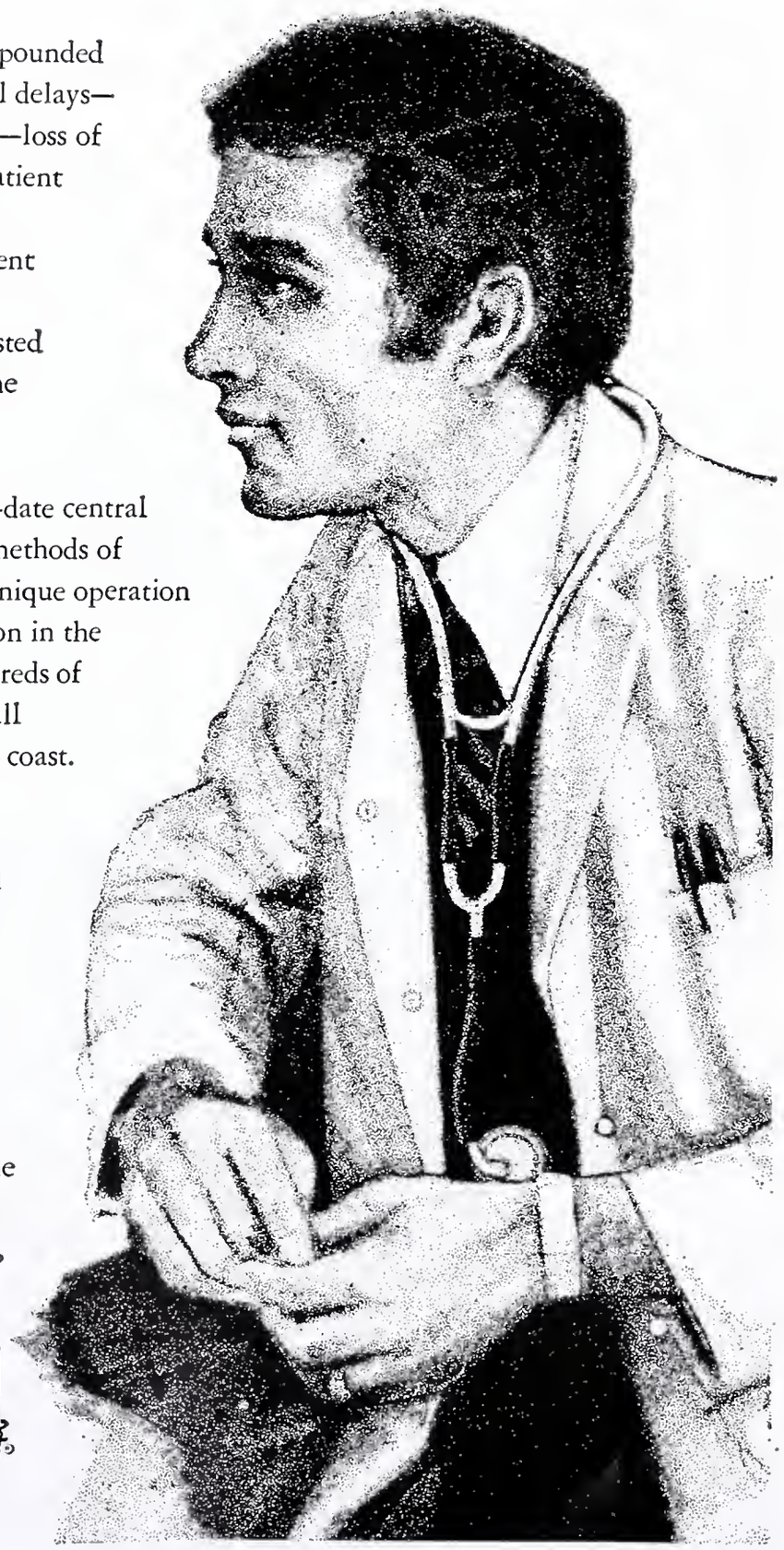
As medical guide, family counselor, trusted friend—you, *doctor,* play a major role in the fight against cancer quackery.

We are here to serve as your partner.

Our National Office maintains an up-to-date central clearinghouse for materials on unproven methods of cancer diagnosis and treatment. This is a unique operation and the principal source of such information in the country. Its services are widely used. Hundreds of inquiries are received and answered from all segments of the community, from coast to coast.

To trigger grass-roots action, we have formulated a model State Cancer Remedy Act designed to control the promotion and sale of unproven methods of cancer management. This has helped to inspire some 20 states to enact or consider legislation against cancer quackery—with active support from the medical community. Copies of the model act, as well as copies of laws in effect, are available through our National and Division offices.

In these actions against cancer quackery, as in all our efforts against cancer, ours is a lifesaving partnership.



American Cancer Society

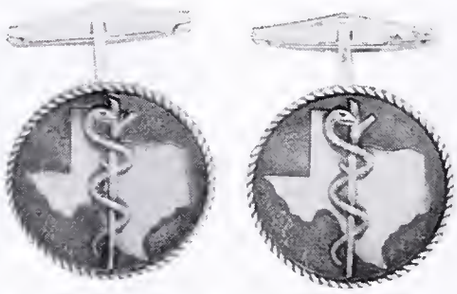
Texas Division Inc.
P. O. Box 9863
Austin, Texas 78766

Order now for Christmas!

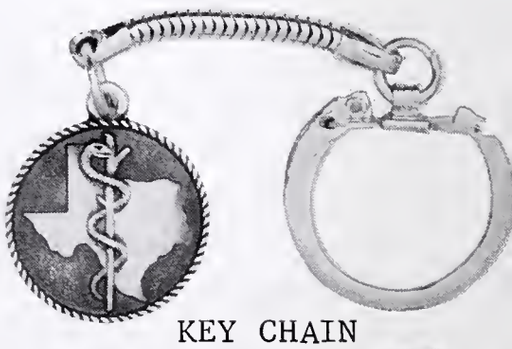
Texas Medical Association and Auxiliary Jewelry

Proceeds go to the Physicians Benevolent Fund

TIE TACK



CUFF LINKS



KEY CHAIN

TIE BAR

MONEY CLIP

PIN & PENDANT

CHARM

Shown slightly smaller than actual size

Please send me the following TMA and Woman's Auxiliary Jewelry

Quantity	Item	14-Karat		Gold Filled		Sterling Silver		Add Diamond	Add Syn. Stone
	Cuff Links	$80.00		$12.75		$12.75		*	*
	Tie Bar - Short	50.75		10.00		9.50			
	Tie Tack	34.50		5.00		5.00			
	Money Clip	53.50		13.00		11.00			
	Charm	34.50		4.75		4.50			
	Pin and Pendant	42.75		5.75		5.75			
	Key Chain			8.00		7.75			

ADD 5% SALES TAX TO PRICE OF ALL ITEMS

Addition of single cut three-point diamond $15.00; synthetic stone $1.50. *Two stones required for cuff links.
When ordering synthetic stones, please specify color; all colors available.
All orders shipped prepaid. Please allow three weeks.

Name_____

Address_____

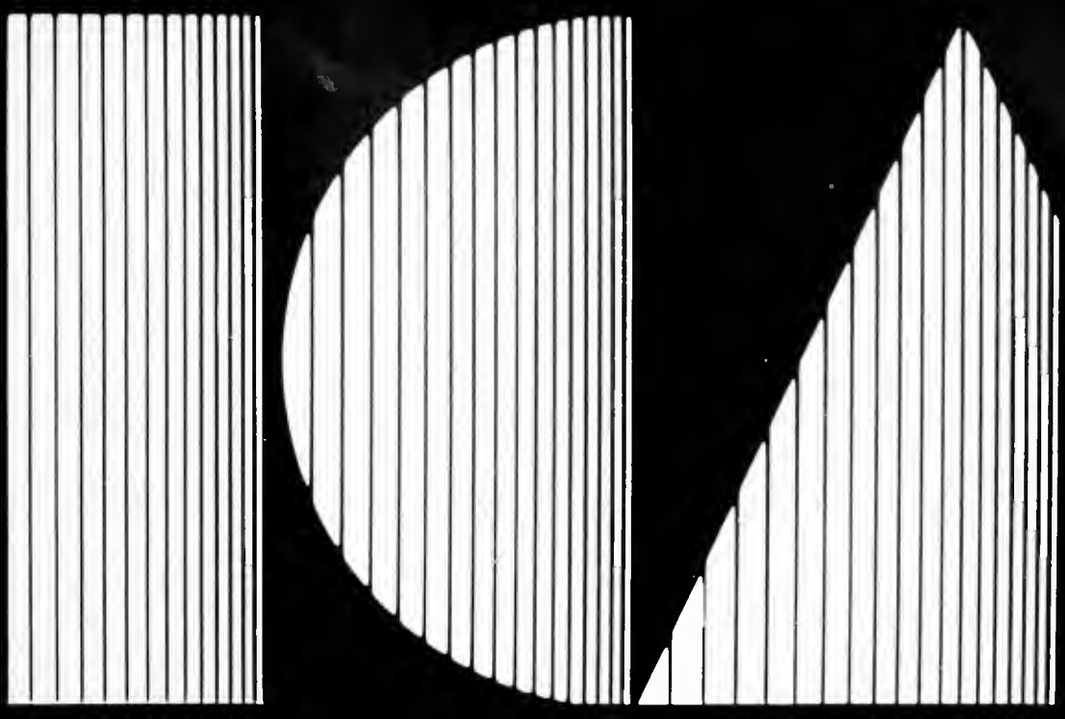
City_____ State_____ Zip_____

Check enclosed for $_____

Make payable to:
Woman's Auxiliary to the
Texas Medical Association

Mail this form to:

Texas Medical Association
and Woman's Auxiliary Jewelry
c/o Physicians Benevolent Fund
1801 North Lamar Blvd.
Austin, Texas 78701



If you believe in preventive medicine, you should believe in us.

We are a highly specialized company of doctors, lawyers and insurance experts. We know what you need. And thanks to ICA's aggressive claims prevention program, you are assured of getting the protection your practice deserves. ICA. The professional company that takes care of professionals. Like you.

INSURANCE CORPORATION OF AMERICA

HOUSTON, TEXAS 713/526-4863

A+AAAAA Reinsurance provided

Our policy is protecting your practice.

Wendell H. Hamrick, MD, receives TMA's Distinguished Service Award

He's been described as a hard-nosed member of the Texas Air Control Board, a physician who has served the medical profession long and well, and a tough but honest man.

The physician who has served the medical profession long and well, Wendell H. Hamrick, MD, was honored for that service by the Texas Medical Association during its Fall Conference in Austin in September.

Dr Hamrick is the 13th recipient of one of the highest honors made by the Association, the Distinguished Service Award.

Community service and honors

Dr Hamrick has "served the medical profession and his community with dedication. Very few persons have devoted such diligence and effort to the advancement of medical education and the delivery of health care to the citizens of our State," said the TMA Board of Councilors in nominating him for the honor.

Organizationally, he has served as president of the Harris County Medical Society in 1960. He is a past Speaker and Vice Speaker of the TMA House of Delegates and is curently chairman of the TMA Council on Constitution and Bylaws.

He also holds memberships in the American Medical Association, the American Industrial Medical Association, the Southwestern Surgical Congress and the American College of Surgeons.

In addition, he was acting health officer for the City of Houston and served for six years as a member of the Texas Air Control Board. During his time on the board, beginning in 1967, he didn't go easy on the industries.

"If some of the big companies would work as hard on pollution control as they do on developing and promoting new products, we'd be making a lot more progress," Dr Hamrick said in an interview in the *Houston Post*.

At one point while on the air control board, Dr Hamrick took on the state's attorney general for not prosecuting the big industry polluters enough.

Background

Dr Hamrick was born in Saucier, Miss, and has lived most of his life in the Houston area.

As an undergraduate, he worked his way through Rice University and then earned his MD degree from the University of Texas Medical Branch in Galveston in 1934.

He served his internship at Jefferson Davis Hospital in Houston, and a surgical residency at the Southern Pacific Hospital in Houston. He also took advance training in surgery at the University of Pennsylvania Graduate School of Medicine.

After practicing briefly in Liberty and Travis Counties he served four years in the United States Navy during WWII. After that he began his medical practice in downtown Houston.

He has since closed his office in the Memorial Professional Building, but he continues to see patients.

Dr Hamrick is married to Thelma Valentine and they have two children, Wendell H. Hamrick Jr and Emily Hamrick Moreland, both of Houston.

His views

Dr Hamrick says he thinks some of the early magic of medicine is being lost, and refers to a number of problems including paperwork, malpractice insurance and government regulations facing young physicians and their practices.

Individual responsibility for protecting one's health is important to him. He advises people to quit smoking and to complain to all the agencies involved with air pollution problems.

Almost retired from practice, Dr Hamrick looks forward to . . . . boating, gardening, fishing and living pleasantly.

Wendell Hamrick, MD, accepts TMA's Distinguished Service Award during Fall Conference in September

Medical Newsmakers

ROGER M. MORRELL, MD, is the new Professor of Neurology and Immunology-Microbiology at Wayne State School of Medicine, Detroit, and Chief of Neurology at the Veterans Administration Hospital, Allen Park, Michigan. Dr Morrell was formerly Assistant Professor of Neurology and Experimental Biology at Baylor College of Medicine, Houston, and Acting Chief of Neurology at the Houston Veterans Administration Hospital.

The American Society of Parasitologists has presented its highest research award to GILBERT CASTRO, PhD, professor of physiology at the Medical School at the University of Texas Health Science Center at Houston. He received the Henry Baldwin Ward Medal for his continuing research into the body's immune response to intestinal parasites.

EDWARD M. COPELAND, MD, professor of surgery at the Medical School of The University of Texas Health Science Center at Houston, has received the American College of Nutrition annual award for distinguished research in clinical nutrition. Dr Copeland's research is in nutritional management for cancer patients.

Newly elected officers for the Texas Pediatric Society are SHELDON W. JOSEPH, MD, Houston, president; A. W. PIERCE, SR, MD, Wichita Falls, president-elect; JOHN PICKETT, MD, Amarillo, vice president; MILTON TALBOT, MD, Austin, secretary; GEORGE FELKNOR, MD, Baytown, treasurer; and HALCUIT MOORE, MD, Dallas, historian.

JACK D. WHEELER, former executive assistant to the president, has been appointed vice president for administration of The University of Texas Health Science Center at Dallas. He will be administratively responsible for the operations of the Library, the Department of Biomedical Communications, Animal Resources Center, and the Computer Resources Center.

The first "Distinguished Alumnus Award" of the Department of Pharmacology at the Tulane Medical Center in New Orleans has been presented to G. ALAN ROBISON, PhD, of The University of Texas Health Science Center at Houston. Dr Robison is recognized for his contribution to cyclic nucleotide research during the past ten years.

COL CARLOS J. G. PERRY, MD, has been named Chairman of the Department of Mental Health at Wilford Hall Medical Center at Lackland Air Force Base. Last year, Dr Perry was the first Air Force psychiatrist to be elected a Fellow in the Aerospace Medical Association. He is a member of the American Psychiatric Association, the Association of Military Surgeons of the US, Society of US Air Force Flight Surgeons, and was past president of the Society of US Air Force Psychiatrists. Dr Perry is Clinical Associate Professor of Psychiatry at the University of Texas Medical School in San Antonio.

Texas State Representative JOHN WILSON, La Grange, has been appointed to the Texas Coordinating Commission for State Health and Welfare Services.

Three major appointments have been made at The University of Texas M. D. Anderson Hospital and Tumor Institute in Houston. E R. GILLEY was named vice president for business affairs and will direct a wide range of business activities and other support services, such as security, data processing and building maintenance. Appointed head of the newly created Department of Urology was DOUGLAS E. JOHNSON, MD, a surgeon

specializing in the treatment of urologic tumors. Dr Johnson is a member of the American Board of Urology and American College of Surgeons. RICHARD G. MARTIN, MD, has been appointed head of the Department of Surgery. Dr Martin, a surgeon with special interests in cancers of the bone and gastrointestinal tract, has served as full professor and chief of general surgery within the department since 1967. He is a member of the American College of Surgeons and James Ewing Society.

TRUMAN G. BLOCKER, JR, MD, acting president of The University of Texas Health Science Center at Houston, has been elected an honorary member of the American Osler Society. Dr Blocker, a plastic surgeon, was active in care of the burn victims from the Texas City explosion in 1947. He has been associated with The University of Texas Medical Branch at Galveston since 1929 and has served as chief of plastic surgery, chairman of the Department of Surgery, executive director, dean, and president of the Medical Branch.

A physician is part of the news team at the NBC-TV station in Houston. CHARLES BERRY, MD, presents health information and comment on news stories three times a week. Dr Berry was medical research director and director for life sciences, National Aeronautics and Space Administration, from 1962 to 1971, and is former president of The University of Texas Health Science Center in Houston.

DEAN FINLEY HERBST, formerly director of special studies for the Coordinating Board, Texas College and University System, has been named head of the new Health Affairs Division of the Coordinating Board. Mrs Herbst, who joined the Coordinating Board staff in 1973, has conducted several studies relating to higher education health programs. In 1974, she directed the report on "The Health of Texans: A Study of Medical and Dental Education, 1974-1980."

ROBERT W. PARKEY, MD, has been named Chairman of the Department of Radiology at The University of Texas Health Science Center at Dallas. Since 1974, Dr Parkey has been associate professor of radiology and chief of nuclear medicine and has been acting chairman of radiology since June 28. He is a member of the Council on Cardiovascular Radiology (American Heart Association), Academic Council of the Society of Nuclear Medicine, representative to the inter-society committee on heart disease for the Society of Nuclear Medicine and a trustee to the Southwest Chapter of the Society of Nuclear Medicine.

The Board of Regents of The University of Texas System has designated new titles for System Administrators. The new title of EDWARD N. BRANDT, JR, MD, is vice president for health affairs, replacing the title of associate deputy chancellor for health affairs.

RONALD ESTABROOK, PhD, Virginia Lozenby O'Hara Professor of Biochemistry at The University of Texas Health Science Center at Dallas, has been named a Wellcome Visiting Professor for the school year 1977-78. As a visiting professor, he will spend several days in February at the Louisiana State University School of Medicine, Shreveport, where he will lecture on the topic, "Metabolism of drugs and cancer-producing chemicals by the body." Dr Estabrook is chairman of the Department of Biochemistry of Southwestern Medical School and former dean of the Graduate School of Biomedical Sciences. He is a member of the Coordinating Council on Medical Education and the Liaison Committee on Medical Education.

Medicine in literature

EDITOR'S NOTE: This month's bibliography, prepared by TMA's Library staff, lists publications related to vitamin C. These and other publications pertaining to this topic are available from the Memorial Library.

VITAMIN C

Anderson TW: Large-scale trials of Vitamin C. *Ann NY Acad Sci* 258:498-504, September 30, 1975.

Ascorbic acid and the common cold. *Nutr Rev* 25(3):228-231, 1967.

Chalmers TC: Effects of ascorbic acid on the common cold; an evaluation of the evidence. *Am J Med* 58:532-536, 1975.

Cook JD, Monsen ER: Vitamin C, the common cold, and iron absorption. *Am J Clin Nutr* 30(2):235-241, 1977.

Coulehan JL, Kapner L, Eberhard S: Vitamin C and upper respiratory illness in Navaho children; preliminary observations (1974). *Ann NY Acad Sci* 258:513-522, 1975.

Dykes MH, Meier P: Ascorbic acid and the common cold; evaluation of its efficacy and toxicity. *JAMA* 231(10):1073-1079, 1975.

Elwood PC, Hughes SJ, St Leger AS: A randomized controlled trial of the therapeutic effect of Vitamin C in the common cold. *Practitioner* 218:133-137, January 1977.

Good health—the simple way. *Nurs times* 72(41):1587, 1976.

Karlowski TR, Chalmers TC, Frenkel LD, et al: Ascorbic acid for the common cold; a prophylactic and therapeutic trial. *JAMA* 231(10):1038-1042, 1975.

Lewis TL, Karlowski TR, Kapikian AZ, et al: A controlled clinical trial of ascorbic acid for the common cold. *Ann NY Acad Sci* 258:505-512, September 30, 1975.

Miller JZ, Nance WE, Norton JA, et al: Therapeutic effect of Vitamin C; a co-twin control study. *JAMA* 237(3):248-251, 1977.

Pauling L: The significance of the evidence about ascorbic acid and the common cold. *Proc Natl Acad Sci USA* 68(11):2678-2681, 1971.

Vitamin C and the common cold. *Nutr Rev* 31(10):303-305, 1973.

Vitamin C and the common cold. *Nutr Rev* 31(10):303-305, 1973.

Vitamin C and the common cold, editorial, *Br Med J* 1(6023):606-607, 1976.

Wilson CWM: Ascorbic acid function and metabolism during colds. *Ann NY Acad Sci* 258:529-539, 1975.

Wilson CWM: Colds, ascorbic acid metabolism, and Vitamin C. *J Clin Pharmacol* 15 (8-9):570-578, August-September 1975.

IN THE TMA LIBRARY

American Medical Association: *Sample Criteria for Short-Stay Hospital Review, Screening Criteria to Assist PSROs in Quality Assurance*. Chicago.

American Pharmaceutical Association, American Dental Association, American Podiatry Association, et al: *Evaluations of Drug Interactions,* ed 2. Washington, DC, American Pharmaceutical Association, 1976.

Arnold RE: *What to do About Bites and Stings of Venomous Animals*. New York, Macmillan Publishing Co, Inc, 1973.

Baldessarini RJ: *Chemotherapy in Psychiatry*. Cambridge, Mass, Harvard University Press, 1977.

Brain WR: *Brain's Diseases of the Nervous System,* ed 8. New York, Oxford University Press, 1977.

Brown JH: *Toxicology and Pharmacology of Venoms from Poisonous Snakes*. Springfield, Ill, Charles C Thomas, 1973.

Clarke EH, Bigelow HJ, Gross SD, et al: *A Century of American Medicine, 1776-1876*. New York, Burt Franklin, 1971.

del Regato JA, Spjut HJ: *Ackerman and del Regato's Cancer; Diagnosis, Treatment, and Prognosis,* ed 5. St Louis, CV Mosby Co, 1977.

Dockerty MB, Parkhill EM, Dahlin DC, et al: *Tumors of the Oral Cavity and Pharynx*. Atlas of Tumor Pathology, Armed Forces Institute of Pathology, 1968, section 4, fascicle 10b.

Emmons CW, Binford CH, Utz JP, et al: *Medical Mycology,* ed 3. Philadelphia, Lea & Febiger, 1977.

Jackson RW, Dandy DJ: *Arthroscopy of the Knee*. New York, Grune & Stratton, 1976.

Krochmal A, Krochmal C: *A Guide to the Medicinal Plants of the United States*. New York, Quadrangle/New York Times Book Co, 1973.

Lapuerta L: *Blood Gases in Clinical Practice*. Springfield, Ill, Charles C Thomas, 1976.

Manni C, Magalini SI, Scrascia E (eds): *Total Parenteral Alimentation; Proceedings of the International Symposium on Intensive Therapy, Rome, May 30-June 2, 1975*. Amsterdam-Oxford, Excerpta Medica, 1976.

Minton SA Jr: *Venom Diseases*. Springfield, Ill, Charles C Thomas, 1974.

Mullan F: *White Coat, Clenched Fist; The Political Education of an American Physician*. New York, Macmillan Publishing Co, Inc, 1976.

Sax NI: *Dangerous Properties of Industrial Materials,* ed 4. New York, Van Nostrand Reinhold Co, 1975.

Tannenbaum M: *Urologic Pathology: The Prostate*. Philadelphia, Lea & Febiger, 1977.

Victor M, Adams RD, Collins GH: *The Wernicke-Korsakoff Syndrome*. Philadelphia, FA Davis Co, 1971.

Wechsler H, Gurin J, Cahill GF Jr (eds): *The Horizons of Health*. Cambridge, Mass, Harvard University Press, 1977.

Whitehead ED (ed): *Current Operative Urology*. Hagerstown, Md, Medical Department, Harper & Row, 1975.

Zatouroff M: *Color Atlas of Physical Signs in General Medicine*. Chicago, Year Book Medical Publishers, Inc, 1976.

IN THE FILM LIBRARY

A Life in Your Hands, motion picture produced by West Glen Films, 1975. 16 min, color, 16 mm.

Alcohol, Drugs or Alternatives, motion picture produced by Sandler Institutional Films, Inc, 1975. 25 min, color.

Beginning of Life, motion picture produced by Cine-Science, Tokyo, 1970. 26 min, color, 16 mm.

New Pulse of Life, motion picture produced by Pyramid Films, 1975. 30 min, color, 16 mm.

"Stretch bras, stretch pants, stretch socks. You are being squeezed to death."

)OCTORS ARE TALKING ABOUT THE 'RACTICAL WAY TO LOWER CHOLESTEROL

Choloxin®
Sodium Dextrothyroxine)

nd for good reasons. Diet alone doesn't lways work. CHOLOXIN® (sodium extrothyroxine) has proved itself to be n effective cholesterol lowering adjunct to iet in euthyroid, non-cardiac patients. It has ndergone ten years of clinical trials and eight ears of practice. The clinical trials consisted f 337 clinical studies involving over 3,000 ypercholesterolemic non-cardiac patients. It is mong the most thoroughly evaluated drugs ver presented to physicians.

ractical, too, is the one-tablet-a-day dosage egimen. It encourages patient cooperation, and 's economical for long-term therapy.

CHOLOXIN (sodium dextrothyroxine) lowers cholesterol 15% to 35%, and keeps it down with most patients. *(Data on file, Flint Laboratories).*

Interested in receiving more information about lipid lowering? Write us or contact your Flint representative. We'll be glad to supply you with a complete product portfolio and samples for your evaluation.

NOTE: See following page for full prescribing information.

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

Choloxin® (Sodium Dextrothyroxine)

Effectively Lowers Elevated Cholesterol With Convenient Once-A-Day Dosage

Four strengths 1, 2, 4, and 6 mg are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below.

	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1.0-2.0 mg.	1.0-2.0 mg.	4.0-8.0 mg.	4.0-8.0 mg.
Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac	1.0 mg.	1.0 mg.	4.0 mg.	4.0 mg.

Choloxin®
(Sodium Dextrothyroxine)

Description

CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as D-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions

The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLDXIN (sodium dextrothyroxine) stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic end-products do not accumulate in the blood.

Indications

This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication. **Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN (sodium dextrothyroxine) is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively, in patients with significant myocardial impairment. CHOLOXIN (sodium dextrothyroxine) dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.**

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications

The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease; history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings

CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN (sodium dextrothyroxine) is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN (sodium dextrothyroxine) is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN (sodium dextrothyroxine). As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN (sodium dextrothyroxine) than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN (sodium dextrothyroxine) in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may not be advisable or possible to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN (sodium dextrothyroxine) therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age

Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLDXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions

It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHDLDXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN (sodium dextrothyroxine) therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHDLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions

The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN (sodium dextrothyroxine); a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN (sodium dextrothyroxine) potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration

For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is approximately 0.1 mg (100 mcg) per kilogram. The initial daily dosage should be approximately 0.05 mg (50 mcg) per kilogram to be increased in up to 0.05 mg (50 mcg) per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied

CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

MEDICINE AND THE LAW

EFFECT OF THE EQUAL CREDIT OPPORTUNITY ACT ON PHYSICIANS IN PRIVATE PRACTICE

The Federal Equal Credit Opportunity Act and Regulation B, intended to bar discrimination in all credit practices, are now in effect. The regulation, promulgated under the act by the Board of Governors of the Federal Reserve System, requires creditors to follow procedures when dealing with applicants for and recipients of credit.

All creditors are subject to the Equal Credit Opportunity Act. By the act's definition, you are a creditor if you regularly and in the ordinary course of business grant to your patients the right to defer payment for medical services rendered.

Granting only incidental credit relieves some of the burdens imposed by the new regulations.

Incidental credit is credit primarily for personal, family, or household purposes not granted under the terms of a credit card account, not subject to any finance charges or interest, and not granted under an agreement allowing the debtor to repay in more than four installments.

Compliance with the first two elements of the definition rarely will be a problem for physicians in private practice.

By the third requirement, if you charge any finance charges, such as interest, you cannot qualify for incidental credit treatment.

The four installment rule may present problems to some doctors who wish to maintain their incidental credit status. If you are in this category, you must make it your policy to require that balances owed you must be paid in four installments or less. In hardship cases, the interval between installments may be lengthened, for example, to 60 or 90 days.

The word "agreement" in the four installments rule is important. Occasionally, a patient may pay his account in more than four installments, although neither the doctor nor the account supervisor has agreed to the payments. Acquiescence in, as opposed to agreement to, such payment would not jeopardize the doctor's incidental creditor status unless there were a high incidence of the accounts that were not treated as delinquent. In that case, an agreement might be inferred.

Compliance

Assuming you qualify for incidental credit treatment, what must you do to comply with the act and regulation?

You must not discriminate against any applicant for credit because of race, color, religion, national origin, sex, marital status, or age, or because the applicant receives income from any public assistance program, or because the applicant has exercised rights under consumer credit laws. These are sometimes referred to as the prohibited bases.

You may continue to evaluate credit applicants on the basis of their willingness and ability to pay.

When a patient applies for credit, you may not ask the applicant's sex, color, race, religion, or national origin, or ask about birth control practices or plans to have children. You may collect this information when it is needed for specific purposes not related to credit, for example, when it is part of a medical history.

Rules

In deciding to grant credit, you may not consider any of the prohibited bases. There are certain exceptions. For example, you may consider age and receipt of public assistance to the extent that these factors may affect continuity of income or other aspects of credit worthiness.

You may not use assumptions or statistics about child bearing and family size. You may not discount or exclude income of the patient or the patient's spouse because

of sex or marital status or any other prohibited basis.

You may not discount or exclude income from part-time employment, retirement benefits, alimony, child support, or separate maintenance payments. However, you may consider the probable continuity of any such income.

You may not take into account whether a telephone is listed in the patient's name. However, you may consider whether there is a phone in the patient's home.

If you consider a patient's credit history, you must include accounts that the patient holds or uses jointly with a spouse. You should also consider any information a patient can offer to show that a reported credit history is unfair, inaccurate, or incomplete.

A physician also may not discourage a patient from making a request or application for credit because of a prohibited basis. You may not refuse to grant a creditworthy married person an individual account.

You may not refuse to keep an account in a maiden name or a combined surname if the patient requests. You may not close or change the terms of a standing credit arrangement merely because your patient's marital status has changed or because the patient reaches a particular age or retires.

Penalties

The Equal Credit Opportunity Act allows persons who have been discriminated against in connection with credit to sue for actual damages and punitive damages. Liability for punitive damages is limited to $10,000 in an individual action and to $500,000 or one percent of the creditor's net worth, whichever is less, in class actions.

Incidental credit advantages

There are two principal advantages to maintaining an incidental creditor status. First, it relieves the creditor of many of the burdens imposed on creditors generally.

The incidental creditor need not require a written credit application and if a written credit application is used, no particular form is necessary.

The incidental creditor is not required to give either written notice of action taken on an application for credit or an explanation of adverse action.

The other notice requirements imposed on creditors generally do not apply to incidental creditors.

The record-keeping requirements imposed by the act and the regulations do not apply to incidental creditors.

The second advantage is that it would be difficult to prosecute an Equal Credit Opportunity Act case against a creditor who is not under the application for record-keeping and notice requirements.

Conclusion

By taking advantage of incidental credit treatment, physicians can avoid the major burdens of the Equal Credit Opportunity Act and Regulation B. By not charging finance charges and by observing the four installment rule, a physician will not be subject to the Truth-In-Lending Act and Regulation Z.

Richard L. Alexander
Brown, Maroney, Rose, Baker &
Barber, TMA Legal Counsel

Deaths

M. M. Minter, MD

Merton Melrose Minter, MD, former chairman of Texas Medical Association's Board of Trustees, died Sept 5, 1977, at the age of 74.

Dr Minter devoted many years of service to professional and civic organizations and received numerous awards. He was elected to TMA's Board of Trustees in 1946, and served as vice-chairman before his election as chairman in 1951. He also was co-chairman of TMA's Public Relations Committee when it was formed in 1943. He later served as chairman of the committee. In 1948, he was chairman of TMA's Section on Medicine.

Dr Minter was a past chairman of the Board of Regents of The University of Texas System, and a recipient of UT's Distinguished Alumnus Award. He served on the board from 1955 to 1961, and was chairman from 1959 until 1961. He was instrumental in the decision to build a UT medical school in San Antonio.

The physician was born in Jewett, Tex, and raised in Corsicana, Tex. He completed his BA degree at The University of Texas at Austin in 1925, and his MD at UT Medical Branch, Galveston, in 1928. His internship was at Research Hospital, Kansas City, Mo, during 1928-1929. He had practiced internal medicine in San Antonio since 1930 and owned the Minter Clinic there.

Dr Minter's professional memberships included the American College of Physicians (life member), American Medical Association, Bexar County Medical Society, International Post Graduate Medical Assembly, American Diabetic Association, and American Heart Association. He also was a member of the San Antonio Medical Foundation's Board of Trustees from 1956 until his death. He was chairman of the board during 1971-1976.

Surviving Dr Minter are his wife, Katherine Huntress Minter, San Antonio; sons, Merton M. Minter, Jr, Short Hills, NJ, and Alan H. Minter, Austin, Tex; brother, Elmer Minter, Dallas; and sisters, Iola Wishard, Dallas, and Mrs Carl C. Williams, Ruston, La.

Dr Minter

B. M. Primer, MD

Dr Primer

Former director of the Austin-Travis County Health Department, Benjamin Muckenfuss Primer, MD, died Dec 8, 1976. He was 76.

Dr Primer retired in 1970 after 25 years with the Health Department. He was instrumental in expanding the department's services and programs, including family planning and dental care for the needy.

Dr Primer was a native of Austin, Tex, and a 1921 graduate of The University of Texas there. He completed his MD degree at The University of Texas Medical Branch, Galveston, in 1924. His internship was at Charity Hospital, New Orleans, during 1924-1925. He received his master of public health degree from Harvard University in 1930.

Following his graduation from Harvard, Dr Primer became director of the Amarillo-Potter County Health Unit. He remained in that position until 1938, when he joined the Austin-Travis County Health Department. He also was director of the San Marcos-Hayes County Health Department on a part-time basis.

Dr Primer interrupted his public health career during 1940-1945 to serve in the US Army. His Army duty included 16 months with the 36th Infantry Division in Africa and Italy. He received the Army Commendation Ribbon and the Purple Heart, and was discharged with the rank of colonel.

Dr Primer was past president of the Texas Public Health Association (1937), Texas Association of Public Health Physicians (1961), and American Association of Pub-

Dr Vandevere

lic Health Physicians (1962). He also was a member of Travis County Medical Society and the American Medical Association.

Surviving the physician are his wife, Mildred G. Primer, Austin, and sons, Benjamin M. Primer, Jr, MD, Staples, Tex, and Charles A. Primer, MD, Tyler, Tex.

Dr Zientek

W. E. Vandevere

William Ewing Vandevere, past president of both El Paso County Medical Society and Texas Society of Ophthalmology and Otolaryngology, died Jan 18, 1977. He was 86.

Dr Vandevere was born in Eden, Miss. In 1912, he received a bachelor of science degree from the University of Mississippi, where he was a member of the varsity football team. He was graduated from the University of Colorado School of Medicine in 1917.

From 1918 to 1919, Dr Vandevere served as a First Lieutenant with the US Army Medical Corps and with the American expeditionary forces in France and England. From 1923 to 1925 he was at the New Orleans Eye, Ear, Nose, and Throat Hospital for his residency. He also did postgraduate work at the New York Eye and Ear Infirmary. He retired in 1968 after practicing for 52 years in El Paso.

Dr Vandevere was an honorary member of Texas Medical Association and a member of the Fifty Year Club of American Medicine. He also was a member of the World Medical Organization, American Academy of Ophthalmology and Otolaryngology, Southern Medical Association, American Medical Association, International Congress of Ophthalmology, and American College of Surgeons (fellow). He belonged to the El Paso Masonic Lodge and Sigma Alpha Epsilon fraternity.

Surviving are Dr Vandevere's wife, Hester Brite Vandevere, El Paso; daughter, Virginia Lee Bates, Canton, Ohio; stepdaughters, Nancy Cooper, El Paso, and Jone Brite White, Marfa, Tex; sister, Mrs H. L. Matthews, Yazoo City, Miss; 13 grandchildren and 11 greatgrandchildren.

R. J. Zientek, MD

Ralph John Zientek, MD, a 20-year resident of Amarillo, died Jan 11, 1977. He was 54.

Dr Zientek was a member of the pathology staff at Northwest Texas Hospital, Amarillo, during 1958-1968, and had been chief of pathology at High Plains Baptist Hospital, also in Amarillo, since 1968. Prior to moving to Amarillo, he was a pathology instructor at the University of Illinois and assistant professor of pathology and assistant pathologist for the Research and Education Hospital, Chicago, an affiliate of the University of Illinois.

The physician was born in Chicago. He attended the Citadel, Charleston, SC, and the University of Maryland, College Park, before entering Johns Hopkins University School of Medicine, Baltimore, in 1945. He completed his MD degree in 1949. His internship was at St Francis Hospital, Peoria, Ill, during 1949-1950. During 1950-1955, he held residencies at the Research and Education Hospital.

Dr Zientek's professional memberships included the Potter-Randall County Medical Society, American Medical Association, Amarillo Surgical Society, College of American Pathologists, and American Society of Clinical Pathologists. He also was a consultant and board member of the Coffee Memorial Blood Center, a member of St Mary's Catholic Church, and a veteran of the armed services.

Surviving Dr Zientek are his wife, Odile Suhre Zientek, Amarillo; daughter, Odile Zientek, Amarillo; sons, Ralph Zientek, Colorado Springs, Colo, and David Zientek, Amarillo; two brothers, Albert Zientek, Niles, Ill, and Irvin Zientek, Barrington, Ill; and three sisters, Jean Borucki, San Antonio; Loretta Branda, Port Richey, Fla; and Phyllis Zientek, Niles.

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

M. M. MINTER
San Antonio, 1903-1977

B. M. PRIMER
Austin, 1900-1976

W. E. VANDEVERE
El Paso, 1891-1977

R. J. ZIENTEK
Amarillo, 1922-1977

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

TEXAS MEDICAL MEMORIAL LIBRARY FUND

1801 N. Lamar Blvd., Austin, Texas 78701

I enclose the amount of $_____. Given in Memory of _____

Please send remembrance card to:

Name _____

Address _____

City and State _____

Donor Information:

Name _____

Address _____

City and State _____

"THE RAPE OF THE PHYSICIAN TAXPAYER"

The most vital concepts of personal financial management are now available for the first time in a complete 4½ HOUR CASSETTE TAPE LECTURE SERIES

This 5 hour Financial Workshop is aimed at acquainting the physician with the newest and most innovative ideas in the following areas:

- Income Tax Planning
- Retirement Objectives & Programs
- Evaluating The Feasibility of Using The Professional Association
- Major Effects of the 1976 Tax Reform Act
- Estate Planning
- Personal Financial Development

This 6 tape cassette series is shipped in an attractive storage album and comes with a complete set of notes and charts and 14 day money back guarantee. The cost of this cassette series is $79.95.

Below are a few comments from participants of this Workshop Series.

. . . It must be evident to you that you are greatly appreciated out here at the medical school. Joe, you give one of the best sessions on anything I have ever heard! You're a born teacher and I'm very appreciative of your talents and efforts.

Thank you again,

BRYAN WILLIAMS, M.D.
ASSOCIATE DEAN FOR STUDENT AFFAIRS, THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL SCHOOL AT DALLAS

. . . I want to take this opportunity to tell you how much I not only enjoyed but profited from your seminar in Houston recently. Keep up the good work. Professionals need you more than you know.

Thanks again. Best Wishes,

GEORGE A. CONSTANT, M.D.
NEUROLOGY & PSYCHIATRY
VICTORIA, TEXAS

My wife and I attended the Seminar presented by Mr J. J. Tallal Jr. in Dallas. We were very impressed by the brilliance of his presentation and the practicality of the message. I know of no other way that a practicing physician could get a better return on an investment of a few hours of his time.

E. E. DILWORTH, M.D.
OBSTETRICS AND GYNECOLOGY
SHREVEPORT, LOUISIANA

. . . Your Seminar was invaluable in revealing to me that all investments must be basically sound, but they become better when wise economic uses of leverage, margin, shelter, renegotiation, and no personal liability can be utilized.

WARREN A. ROSS, M.D.
ORTHOPEDIC SURGEON
AUSTIN, TEXAS

This program does not involve the giving of advice in regards to securities nor the giving of legal advice.

Please send me_____set(s) of the Personal Financial Management Workshop @ $79.95 each.

NAME_____

ADDRESS_____

PHONE_____

CITY_____STATE_____ZIP_____

Send form to: *Joseph J. Tallal, Jr.*
Financial Management
9516 Milltrail
Dallas, Texas 75283

Lecturer: Joseph J. Tallal, Jr.

Joseph J. Tallal Jr. has been working exclusively with professionals in the management and implementation of their personal affairs for the last four years. Mr. Tallal has spoken at various financial workshops throughout the country to a total audience that now exceeds 1300 physicians. He is also an instructor at The University of Texas Southwestern Medical School in Dallas of a course entitled "Personal Financial Management for New Physicians."

Texas Physicians' Directory

DIRECTORY RATES & DATA: Space is available to TMA members at $12.50 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. Section headings are limited to those specialties designated by the American Medical Association. A list of these specialties is available upon request. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Clinics

THE FORT WORTH CLINIC
1221 West Lancaster Avenue, Fort Worth, Texas 76102
Telephone 817 336-7191

INTERNAL MEDICINE
Kendra J. Belfi, M.D.
John M. Church, M.D.
Thomas J. Coleman, M.D.
Robert R. Dickey, M.D.
Ferd E. Garrison, Jr., M.D.
Cortell K. Holsapple, M.D.
John E. Johnson, Jr., M.D.
O. M. (Jack) Phillips, M.D.

GENERAL SURGERY
John H. Sewell, M.D.
Robert L. Sewell, M.D.

ORTHOPEDIC SURGERY
Thomas E. Rapp, M.D.

CONSULTANTS IN RADIOLOGY
Victor E. McCall, M.D.
Dixon Presnall, M.D.
Harry H. Whipp, M.D.

FIFTH AVENUE CLINIC
650 Fifth Avenue, Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

MEDICAL ASSOCIATES OF CORPUS CHRISTI, P.A.
1533 South Brownlee, Corpus Christi, Texas 78404
Telephone 883-7411

FAMILY MEDICINE
Travis B. Phelps, M.D., F.A.A.F.P.
T. D. Harvey, M.D., A.B.F.P.
H. R. Rose, M.D., A.B.F.P.
C. L. Vernor, M.D.
Frederick S. Maurer, M.D.

ORTHOPEDIC SURGERY
C. M. Yanez, M.D., F.A.C.S.

INTERNAL MEDICINE
G. A. Reeves, M.D.
Pruett Moore, J., M.D.
Mark G. Strauss, M.D.

EXECUTIVE DIRECTOR
Gene Hybner

DIRECTOR OF NURSES
Pat Parker, R.N.

Remind your colleagues of your specialty and office location.
Purchase a listing in the "Texas Physicians' Directory."

BEELER-MANSKE CLINIC
9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

INTERNAL MEDICINE
C. M. Maruri, M.D.
A. J. Nodarse, M.D.

GENERAL SURGERY
B. W. Hink, M.D., F.A.C.S.

FAMILY MEDICINE
J. H. Cochrane, Jr., M.D., F.A.A.F.P.
J. W. O'Bryant, M.D.
A. A. Piske, M.D.

FAMILY MEDICINE AND GENERAL SURGERY
Salvador Faus, M.D.

CLINIC MANAGER
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

MALONE AND HOGAN CLINIC
1501 West 11th Place, Big Spring, Texas 79720, Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.
W. B. Allensworth, M.D.

GENERAL SURGERY
C. B. Marcum, M.D., F.A.C.S.
J. E. Mathews, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
C. T. Moore, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
D. M. Logan, M.D.
V. T. Smith, M.D.

DERMATOLOGY
Merrill M. Cooper, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.
J. W. Kuykendall, M.D.

PEDIATRICS
J. M. Woodall, M.D.
B. R. Owen, M.D., F.A.A.P.

RADIOLOGY & NUCLEAR MEDICINE
Buerk Williams, M.D.
A. P. Goswami, M.D.

UROLOGY
J. W. Cowan, M.D.

PODIATRY
Bradford Glass, D.P.M.

PATHOLOGY
B. A. Campomanes, M.D.

CONSULTANT IN ELECTROENCEPHALOGRAPHY
M. L. Proler, M.D.

ADMINISTRATION
R. L. Heith, Administrator

RUGELEY AND BLASINGAME CLINIC
2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Richard R. Raphael

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.
W. C. Yankowsky, M.D.

UROLOGY
H. Z. Fretz, M.D.

DERMATOLOGY
T. S. Arrington, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

ANESTHESIOLOGY
C. G. Spears, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77030
Telephone 713 797-9191

Internal Medicine and Diagnosis

ALLERGY
Arthur T. Pedersen, M.D.

CARDIOVASCULAR DISEASE
Thomas J. Fatherree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.
Bogusław Godlewski, M.D.

DERMATOLOGY
Samuel F. Bean, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Raymond L. Gregory, M.D.
R. Frederick Gregory, M.D.
Thomas J. Hanson, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.
Michael Gagliardi, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George T. Conklin, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
George Burnazian, M.D.
Benjamin L. Portnoy, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.
James V. Ryan, M.D.

NEPHROLOGY
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.

NEUROLOGY
Donald J. Russell, M.D.
George Isaacs, M.D.
Ernesto Infante, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.
Harry R. Price, M.D.
Edward L. Middleman, M.D.
Martin J. Hrgovic, M.D.

PATHOLOGY
Paul B. Radelat, M.D.
Ashok M. Balsaver, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.
Martin L. Kaplan, M.D.
Louis C. Waddell, Jr., M.D.

RADIOLOGY
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.
Joe B. Wilson, M.D.
Howard J. Pollock, M.D.

NUCLEAR MEDICINE
Donald A. Podoloff, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
Robert B. Hall,
Administrator

HOUSTON HEADACHE CLINIC
Park Plaza Professional Building
1213 Hermann Drive, Suite 855
Houston, Texas 77004
(713) 528-1916

Neurology
Ninan T. Mathew, M.D., F.R.C.P.(C)

Allergy

HOUSTON ALLERGY CLINIC
Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Richard H. Jackson, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Warren J. Raymer, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
D. W. Waddell, M.D., F.A.A.C.I.A.
Ramon Garrido, M.D., F.A.C.A., F.A.A.C.I.A.*
(Certified American Board of Pediatrics)
*Diplomate American Board of Allergy & Immunology

Suite 444, Hermann Professional Building
6410 Fannin St., Houston, Texas 77030, 713 797-0900

PETER B. KAMIN, M.D., P.A.
Certified American Boards of Pediatrics and Allergy
Diplomate American Board of Allergy and Immunology
Allergy and Immunology

Suite 601, Oak Hills Medical Building
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Phone 512 696-4405 or 227-6331

TMA Group Insurance Plans
. . . Another service of your association

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

JOHN P. McGOVERN, M.D.
Director-Consultant

THEODORE J. HAYWOOD, M.D.
ORVILLE C. THOMAS, M.D.
JOSEPH T. QUENG, M.D.
LAWRENCE G. THORNE, M.D.
K. VENUGOPALAN, M.D.
ROBERT E. SMITH, M.D.
JAMES A. AYERS, M.D.
EUNICE W. CHOU, M.D.
ALBERT LEHMANN, M.D.
GERALD T. MACHINSKI, M.D.

Research Associates
MICHAEL H. SMOLENSKY, Ph.D.
ALAIN REINBERG, M.D., Ph.D.
CALVIN J. McLERRAN, Ph.D.
MICHAEL A. McCORMICK, Ph.D.
GLENNA M. KYLE, M.S.
ITING MAY LU, M.S.

Consultants

EVAN M. HERSH, M.D.
JUDITH H. MARSTON, Ph.D.
Immunology

JAMES A. KNIGHT, M.D.
Psychiatry

HERBERT C. McKEE, Ph.D.
RICHARD K. SEVERS, Ph.D.
Air Pollution

CAROLYN S. LEACH, Ph.D.
Clinical Laboratories

JOHN A. THOMAS, Ph.D.
Clinical Pharmacology

THOMAS D. DOWNS, Ph.D.
Biometrics

WARREN E. SCHALLER, H.S.D.
Allied Health Sciences

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025, 713 661-1444

CORPUS CHRISTI ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology

2530 Morgan, Corpus Christi, Texas, 882-3487

STUART ALAN MASON, M.D., P.A.
Fellow American Association for Clinical Immunology and Allergy
Fellow of the American College of Allergists
Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

ALLERGY AND IMMUNOLOGY
Joseph T. Sams, M.D., P.A. or C. David Meadows, M.D., P.A.
Diplomates of the American Board of Allergy and Immunology

900 W. Randol Mill Rd., Suite 215, Arlington, Texas 76012, 817 277-1161

CHARLES A. RUSH, JR., M.D.
Diplomate/American Board of Allergy & Immunology
Fellow, A.A.A., A.C.A., A.A.C.I.A.

Northeast Medical Clinic Association
7601 Glenview Drive
Fort Worth, Texas 76118

FREDERICK W. GROVER, M.D. & ASSOCIATES
Diplomate of the American Board of Allergy and Immunology
Allergy and Immunology
Children and Adults
6114 Sherry Lane, Preston Center, Dallas, Texas 75225
Telephone: (214) 363-7790

MEMORIAL LIBRARY
TEXAS MEDICAL ASSOCIATION
1801 North Lamar Blvd., Austin, Texas 78701, 512 477-6704

A clinical library designed to assist the practicing physician

50,000 bound volumes • extensive reprint and periodical collection
• 400 lay and professional films • pathological slide sets
• cassette and reel-to-reel tapes from AMA, Audio Digest
• MEDLINE computer data service

. . . Another service of your association

Colon & Rectal Surgery

ALVIN BALDWIN, JR., M.D.
Diplomate American Board of Colon and Rectal Surgery

R. D. DIGNAN, M.D.
Diplomate American Board of Surgery
Diplomate American Board of Colon and Rectal Surgery

Suite 1209 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246
Telephone 824-2573

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery

2715 Fannin Street, Houston, Texas

C.D.L. CROMAR, M.D., M.S., F.R.C.S.E., F.R.C.S.C.
Surgery of the Rectum and Colon

Suite 8, 3337 Plainview, Pasadena, Texas 77504

FT. WORTH PROCTOLOGIC CLINIC, P.A.
Colon and Rectal Surgery and Colonoscopy

Sommai Sehapayak, M.D.
Diplomate American Board of Colon and Rectal Surgery

Medical Tower, Suite 210, 1550 West Rosedale,
Fort Worth, Texas 76104, 817-338-4501 (24 hours)

SUVID PITA, M.D.
Colon and Rectal Surgery
Colonoscopy

Barnett Tower, Baylor Medical Plaza
3600 Gaston Ave, Suite 411
Dallas, Texas 75246
Telephone 214 821-4300

MANUEL G. LAGON, M.D., F.A.C.S.
Diplomate American Board of Colon and Rectal Surgery

FORT WORTH COLON AND RECTAL CLINIC, P.A.
Colonoscopy, Colon and Rectal Surgery

909 Eighth Avenue, Fort Worth, Texas 76104; Telephone 332-1371

Dermatology

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy

1400 Eighth Street, Wichita Falls, Texas

DRS. PIPKIN AND RESSMANN
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies

714 Medical Arts Bldg., San Antonio, Texas 78205

JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
A Professional Association
Dermatology, Syphilology, and Cancer of the Skin

3801 19th St., Suite 500, Lubbock, Texas 79410

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies

7777 Forest Lane, Suite 214, Dallas, Texas 75230; Phone 661-7460

GERALD A. CASID, M.D., P.A.
Skin Diseases—Skin Tumors
Hair Transplantation, Dermabrasion, Chemical Peels

333 N. Shiloh Rd., Garland, Texas 75042
Phone 214 272-5451

DERMATOLOGY ASSOCIATES OF DALLAS
David S. Alkek, M.D.
Lon E. Rogers, M.D.
Adult and Pediatric Dermatology
Dermatologic Surgery

Medical City II, Suite 2309, 7777 Forest Lane,
Dallas, Texas 75230; Telephone 214 661-7661

WILLIS I. COTTEL, M.D.
Practice Limited to Skin Cancer
Mohs' Chemosurgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960

Endocrinology

ENDOCRINE ASSOCIATES OF DALLAS, P.A.
STANLEY FELD, M.D.
RICHARD SACHSON, M.D.
Practice Limited to Endocrinology

Douglas Plaza Bldg., Telephone: 363-5535
8226 Douglas Avenue, Dallas, Texas 75225

ZAVEN H. CHAKMAKJIAN, M.D.
SAMUEL P. MARYNICK, M.D.
Practice Limited to Endocrinology & Metabolism

3500 Gaston Avenue, Dallas, Texas 75246
Telephone 214 820-2216

Family & General Practice

GLENN C. COATES, M.D.*
GENE V. HAVERLAH, M.D.
EUGENE M. TOKAR, D.D.S.

1303 Hospital Blvd., Floresville, Texas 78114, 512 393-2527

*Diplomate American Board of Family Practice

SAMUEL SILVA, M.D.
Hair Transplantation

4759 South Freeway, Fort Worth, Texas, 817 923-7374

TMA Members' Retirement Trust (Keogh)

. . . Another service of your association

Gastroenterology

CECIL O. PATTERSON, M.D., F.A.C.P.
Gastroenterology, Gastroscopy, Esophagoscopy
1414 Medical Arts Building, Dallas, Texas, 742-6141-44

MILFORD O. ROUSE, M.D., F.A.C.P.
Consultations in hospitals only

DRS. BAILEY, DOUGLAS AND DEVANEY ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
George T. DeVaney, M.D.
Nisar Ahmed, M.D.

KALMAN NARAYAN, M.D.
Diplomate American Board of Internal Medicine
Gastroenterology, Gastroscopy, Colonoscopy, Polypectomy, E.R.C.P.

909 8th Ave., Suite 7, Ft. Worth, Texas 76104, 817 336-9055

General Surgery

BURT B. SMITH, M.D., F.A.C.S.
Surgery
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery

728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery

1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Thoracic Surgery
Vascular, General and Thoracic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue,
Dallas, Texas 75246, 821-2356

ROBERT J. TURNER, III, M.D., F.A.C.S.
Diplomate American Board of Surgery
General and Peripheral Vascular Surgery

The Saint Joseph Professional Building
1400 South Main Street, Suite 104
Fort Worth, Texas 76104, 335-8311

ROBERT M. STECKLER, M.D.
Diplomate American Board of Surgery
Head and Neck Surgery, Surgery, and Surgical Oncology

Baylor Medical Plaza, Suite 1008, 3600 Gaston Avenue,
Dallas, Texas 75246, 214 827-9880

ROBERT DAVIS, M.D., M.B., B.Ch. (Rand), F.R.C.S. (Edin.)
General Surgery
430 Park Plaza Professional Building, 1213 Hermann Drive,
Houston, Texas 77004; 713 528-0597
By Appointment

Gynecology

RAYMOND H. ABRAMS, M.D., F.A.C.O.G.
Diplomate American Board of Obstetrics and Gynecology
Gynecological and Reconstructive Surgery

3434 Swiss Avenue, Suite 401, Dallas, Texas 75204
Telephone 214 823-1063

Hand Surgery

L. Lee Lankford, M.D. and Peter R. Carter, M.D.
HAND SURGERY ASSOCIATION
Hand Surgery and Upper Extremity Reconstructive Surgery

Baylor Medical Plaza, Barnett Tower, Suite 802, 3600 Gaston Avenue
Dallas, Texas 75246, 214 823-5351

Neurological Surgery

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery

Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Morris Sanders, M.D.
Phillip E. Williams, Jr., M.D.
Ira C. Denton, Jr., M.D.
W. Robert Hudgins, M.D.
Jack Woolf, M.D., Consultant

5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620,
Dallas, Texas 75235; 214 637-0420

8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905,
Dallas, Texas 75231; 214 369-7596

3600 Gaston Avenue, Barnett Tower, Baylor Medical Plaza, Suite 310,
Dallas, Texas 75246; 214 826-1976

JACK STERN, M.D., F.A.C.S.
GARY C. HUTCHISON, M.D., F.A.C.S.
THOMAS R. BOULTER, M.D., F.A.C.S.
Neurological Surgery

8210 Walnut Hill Lane, Suite 805, Dallas, Texas 75231, 363-8524

RONALD SMITH, M.D.
Neurological Surgery

901 South Lake, Fort Worth, Texas, 336-0551

EL PASO NEUROLOGICAL INSTITUTE
Professional Association
Neurology, Neurosurgery, Electroencephalography
Neuro-Radiology, Physiotherapy

William J. Nelson, M.D., Neurosurgery
John T. O'Neal, M.D., Neurosurgery
Robert D. Schneider, M.D., Neurology and Electroencephalography
Steven K. Crouse, M.D., Neurology and Electroencephalography

Medical Plaza Bldg., Suite 307
El Paso Medical Center
1501 Arizona Avenue, El Paso, Texas 79902
Telephone 915 532-8901

TMA International Travel Program
. . . Another service of your association

CHERRY-LONG NEUROSURGERY ASSOCIATION
GLENN R. CHERRY, M.D., D.A.B.N.S., F.A.C.S.
R. GORDON LONG, M.D., D.A.B.N.S., F.A.C.S.
BENNIE B. SCOTT, M.D.
Neurological Surgery
Baylor Medical Plaza — 605 Barnett Tower
3600 Gaston Avenue — Dallas, Texas 75246
Telephone 214 826-7060

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D., F.A.C.S.
E. FLOYD ROBINSON, M.D.
Neurological Surgery
2210 Maroneal, Houston, Texas 77025, 523-3684

TEXAS NEUROLOGICAL INSTITUTE AT DALLAS, P.A.
Neurological Surgery
James E. Bland, M.D.
Martin L. Lazar, M.D.

Medical Neurology, Electroencephalography and Electromyography
Ralph G. Greenlee, Jr., M.D.
Allan L. Naarden, M.D.
Richard R. North, M.D.
William S. Woodfin, M.D.

Neuro-Ophthalmology
Peter R. Bringewald, M.D.

Director, Pain Relief Center and Neuroanesthesiologist
P. Prithvi Raj, M.D.

Consultant in Speech
Josephine Simonson, M.A.

7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

SOUTHWEST NEUROSURGICAL ASSOCIATES
Richard H. Moiel, M.D.
Frank S. Yelin, M.D.
Arthur Evans, M.D.

601 Medical Towers, Houston, Texas 77030; 713 790-0795
7777 Southwest Freeway, #942, Houston, Texas 77074

Nuclear Medicine

NUCLEAR MEDICINE LABORATORIES OF TEXAS
Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., M.D., F.A.C.N.M.
Director - 713 790-0540
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, JR., M.D., F.A.C.N.M.
Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540

Diplomate American Board of Nuclear Medicine

Occupational Medicine

Eric G. Comstock, M.D.
Diplomate American Board of Medical Toxicology

OCCUPATIONAL TOXICOLOGY
1802 Medical Towers, Houston, Texas 77030; 713 790-0160

Ophthalmology

HOUSTON EYE ASSOCIATES
1100 Hermann Prof. Bldg., Houston, Texas 77030, 713 790-1100

Richard S. Rulz, M.D., F.A.C.S.
Charles E. Russo, M.D., F.A.C.S.
Malcolm L. Mazow, M.D., F.A.C.S.
Robert H. Stewart, M.D., F.A.C.S.
Robert B. Wilkins, M.D., F.A.C.S.
Jeffrey D. Lanier, M.D., F.A.C.S.
Michael A. Bloome, M.D., F.A.C.S.
Paul C. Salmonsen, M.D.
Richard L. Kimbrough, M.D.

DRS. ALPAR, TAYLOR, HOWELL, CURRIE & WEINBERGER
Ophthalmology
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Hugh B. Currie, M.D.
Bruce L. Weinberger, M.D.
Diplomates of the American Board of Ophthalmology
15 Medical Drive, Amarillo, Texas

TEXAS RETINA ASSOCIATES
Albert Vaiser, M.D.
William B. Snyder, M.D.
William L. Hutton, M.D.
Dwain G. Fuller, M.D.
Diseases and Surgery of the Retina and Vitreous
318 Medical Arts Building, Dallas, Texas, 748-0958

BRUCE C. TAYLOR, M.D.
RICHARD L. WINSLOW, M.D.
Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E., Dallas, Texas 75204
214 521-1153

McPHERSON ASSOCIATES
Diseases and Surgery of the Retina and Vitreous
Alice R. McPherson, M.D.
Robert A. Moura, M.D.
Arthur W. Willis, M.D.
Robert W. Butner, M.D.

6436 Fannin, Suite 800, Houston, Texas 77030
713 797-1903

EYE ASSOCIATES
Diseases and Surgery of the Eye
Charles A. Sargent, M.D.
Alan C. Baum, M.D.

7777 Southwest Freeway, #916, Houston, Texas 77074; 713 777-7145

CORPUS CHRISTI EYE ASSOCIATES
J. Gordon Bryson, M.D.
C. A. Struve, M.D.
John W. Lewis, M.D.

3166 Reid Drive, Corpus Christi, Texas 78404, Phone 853-7319

EYE CENTER OF AUSTIN
3913 Medical Parkway
Austin, Texas 78756; 512 451-8484

Edward J. Petrus, M.D.
Richard E. Nieman, M.D.

JOHN Y. HARPER, JR., M.D., P.A.
Diseases & Surgery of the Vitreous and Retina

601 Madison Square Medical Building
311 Camden Street, San Antonio, Texas 78212
512 226-1812

TMA Physicians' Placement Service
. . . Another service of your association

PETER R. BRINGEWALD, M.D.

Neuro-Ophthalmology

Texas Neurological Institute at Dallas, P.A.
7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

By appointment only.

COASTAL BEND EYE ASSOCIATES

Jack A. Sahadi, M.D.

900 Morgan Avenue, Corpus Christi, Texas 78404
Telephone 512 888-4288

Orthopedic Surgery

H. H. Beckering, M.D.
L. Ray Lawson, M.D.
George Truett James, M.D.
Robert D. Vandermeer, M.D.
Wynne M. Snoots, M.D.
R. Stephen Curtis, M.D.

W. B. CARRELL MEMORIAL CLINIC

A Professional Association
2828 Lemmon Ave., Dallas, Texas

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas

Louis J. Levy, M.D.
Henry C. McDonald, Jr., M.D.
Fred W. Sanders, M.D.
James M. Beckley, M.D.
Joseph H. Gaines, M.D.

Ralph E. Donnell, M.D.
F. Carlton Hodges, M.D.
J. Price Brock, Jr., M.D.

ORTHOPEDIC ASSOCIATES

Diplomates American Board of Orthopedic Surgery

1133 N. 19th St., Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC

Joseph Barnhart, M.D.
Donald T. Lazarz, M.D.
Lee C. Detenbeck, M.D.
Thomas S. Padgett, M.D.

5620 Greenbriar, Houston, Texas 77005, 526-6262 and
Parkway Towers Professional Building, 150 West Parker Road,
Houston, Texas 77022, 691-3905

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr., M.D.
Kenneth C. Scholz, D.D.S., M.D.
G. S. Gill, M.D.

3702 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

THE ORTHOPEDIC GROUP OF RICHARDSON

Charles E. Graham, M.D.
M. Gayle Glidewell, M.D.

Orthopedic Surgery

812 S. Central Expressway, Richardson, Texas 75080, 231-6396

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr., M.D.
E. E. Rising, Jr., M.D.*
C. Poindexter, M.D.
C. R. Vavrin, M.D.
Frank R. Vincenti, M.D.
Diplomates American Board of Orthopaedic Surgery
*Emphasizing Surgery of the Hand

801 West Randol Mill Road, Arlington, Texas 76012, 817 261-8284

ADDRESS CHANGE? Avoid missing or delayed mail. Send old and new address to Membership Department, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701.

LOUIS W. BRECK, M.D., P.A., F.A.C.S.

Diplomate American Board of Orthopaedic Surgery

Practice Limited to Orthopaedic Surgery

1209 North Kansas, El Paso 79902
Telephone 915 544-3831

THURSTON DEAN, M.D.

Diplomate American Board of Orthopedic Surgery

509 N. Garfield Street
Midland, Texas 79701
Telephone: 915 682-0433 or 682-0163

ORTHOPEDIC ASSOCIATES OF DALLAS

F. Leon Ware, M.D.
Dan R. Sutherland, M.D.
John B. Gunn, M.D.
Richard A. Shirley, M.D.
R. Dan Loyd, M.D.

Orthopedic Surgery

3600 Gaston Avenue, Suite 303
Dallas, Texas 75246; 214 823-7090

Otolaryngology

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.

Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

EL PASO EAR, NOSE AND THROAT ASSOCIATES

Otolaryngology, Audiology and Electronystagmography

Mark J. Wegleitner, M.D.
Lyle D. Weeks, M.D.
Nancy Parker, M.S.-Audiologist

First American Title Bldg., Suite 160, 5959 Gateway West
El Paso, Texas 79925

Otology

DANIEL McNAMARA MARTINEZ, M.D., F.A.C.S.

Otology and Otoneurology

8210 Walnut Hill Lane, Presbyterian Professional Building,
Suite 400, Dallas, Texas 75231; 214 691-7331

DALLAS HEARING, BALANCE AND OCULAR PULSE LABORATORY

Audiology—Vestibulometry—Non-invasive Carotid and Vertebral Circulation Studies

402 Presbyterian Professional Building, 8210 Walnut Hill Lane,
Dallas, Texas 75231; 214 691-7367

Pathology

FORT WORTH MEDICAL LABORATORIES

John J. Andujar, M.D.
Dorothy Patras, M.D.

1400 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

TMA Automobile Lease Program
. . . Another service of your association

PRUITT MEDICAL LABORATORIES

Jack Pruitt, M.D.
E. Hernandez, M.D.
Diplomates, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology, Medicolegal Consultation
P. O. Box 160, Lufkin, Texas 75901, 634-4451

BROWN & ASSOCIATES MEDICAL LABORATORIES

Clinical Pathology, Hematology, Surgical Pathology, Exfoliative Cytology and Electrophoresis

Wilson G. Brown, M.D.
George V. Miller, M.D.
Walter G. Olin, Jr., M.D.
John R. Thomas, M.D.
S. Joseph Skinner, M.D.
Joe B. Haden, M.D.
Enrique van Santen, M.D.
Elaine V. Shalek, M.D.
Robert H. McNeely, M.D.
Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas 77030
220 Park Plaza Prof. Bldg., Houston, Texas 77004
Telephone 527-5230
Mailing Containers on Request—Office Pickup Service in Houston

WACO CLINICAL PATHOLOGY LABORATORY

K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Robert Wayne Walter, M.D., F.A.C.P.
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation
Mailing Containers on Request
2112 Washington Ave., P.O. Box 3160, Waco, Texas 76707, 756-7226

J. S. Wilkenfeld, M.D., Medical Laboratories, Inc.

J. S. WILKENFELD, M.D. ENA E. MOCEGA, M.D.
Diplomates of the American Board of Pathology

Anatomical Pathology, Clinical Pathology Exfoliative Cytology and Dermatopathology

8850 Long Point Road, P.O. Box 55008
Houston, Texas 77055, 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

ARTHUR L. RAINES, M.D. AND ASSOCIATES

Pathologists

DIPLOMATES, AMERICAN BOARD OF PATHOLOGY
Clinical Pathology — Surgical Pathology
Exfoliative Cytology — Medicolegal Consultation
Hospital and Clinic Laboratory Consultation
P. O. Box 118, Cleburne, Texas 76031
817 645-9181, Ext. 360
MAILING CONTAINERS ON REQUEST

HENRY B. OWENS, M.D., F.C.A.P.

Diplomate American Board of Pathology

Cytology and Tissue Pathology Only

801 E. Border St., Suite M. P. O. Box 1627
Arlington, Texas 76010, 817 461-2771

Mailing Containers on Request—Office Pickup Service in Arlington

PATHOLOGY ASSOCIATES OF TEXAS

Medical Laboratory

1050 W. Magnolia, Fort Worth, Texas 76104
P. O. Box 2176 Zip Code 76101, 817 335-5297
Diplomates, American Board of Pathology

May Owen, M.D.
John W. Alexander, M.D.
John E. Bremner, M.D.
Vincent C. Cirone, M.D.
Donald M. Cohen, M.D.
Robert W. Collison, M.D.
C. D. Fitzwilliam, M.D.
Feliks Gwozdz, M.D.
Alcina F. Jatoi, M.D.
Raoul Kunert, M.D.
Charles B. Mitchell, M.D.
B. V. Ramakrishna, M.D.
Richard C. Schaffer, M.D.

Consulting Toxicologist: Jack E. Wallace, Ph.D.

Branch Laboratory Facilities

Doctor's Building, Suite 109
800 Fifth Avenue
Fort Worth, Texas
335-5297 (Ext. 31 and 60)

Medical Tower Building, Suite 219
1550 West Rosedale
Fort Worth, Texas
335-5297 (Ext. 32 and 62)

Medical Plaza Building, Suite 110
800 Eighth Avenue
Fort Worth, Texas
335-5297 (Ext. 57 and 59)

H.E.B. Medical and Dental Center, Suite 401
2700 Tibbets Drive
Bedford, Texas
283-2861

Physical Medicine & Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES WARM SPRINGS FOUNDATION, INC.

P. O. BOX 58, GONZALES, TEXAS 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy, Recreational Therapy, School from first grade through twelfth grade
DAVID E. GUMPER, Administrator
LARRY E. BROWNE, M.D., Medical Director

ROBERTO G. ROLFINI, M.D.

Diplomate American Board of Physical Medicine & Rehabilitation

Rehabilitation Medicine and Electromyography

702 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205, Telephone 226-2424

SHOAL CREEK REHABILITATION CENTER

3501 Mills Avenue, Austin, Texas 78703, 512 452-0361

Rodney J. Simonsen, M.D., Medical Director
Joe T. Powell, M.D., Associate Director

Comprehensive rehabilitation facilities for spinal cord injury, stroke, head injury, pain management, and related conditions

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D., F.A.C.S.
THOMAS M. BIGGS, M.D., F.A.C.S.
LAURENCE E. WOLF, M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery

PLASTIC SURGERY

5419 Caroline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.

Plastic, Maxillo-Facial and Hand Surgery

530 Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

JOHN B. PATTERSON, M.D., F.A.C.S.

Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Cosmetic Surgery

612 Doctors Bldg., Fort Worth, Texas 336-0356

PLASTIC SURGERY ASSOCIATES

Simon Fredricks, M.D., F.A.C.S.
Jonathan J. Dora, M.D.

Aesthetic, Plastic, Reconstructive and Hand Surgery

1103 Medical Tower, Houston, Texas 77030, 795-5575

DAVID A. GRANT, M.D., F.A.C.S.

Diplomate American Boards of Surgery and Plastic Surgery

Plastic & Reconstructive Surgery
Cosmetic Surgery

606 Medical Plaza Bldg., 800 Eighth Avenue, Fort Worth, Texas 76104, 335-4751

VALENTIN GRACIA, M.D., P.A., F.A.C.S., F.I.C.S., D.A.B.

Aesthetic Surgery—Burns

1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

PATRICK H. BECKHAM, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1111 West 34th Street, Suite 207, Austin, Texas 78705, 459-3258

WILLIAM E. BARNES, M.D.
Diplomate American Board of Plastic Surgery
Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 608, Austin, Texas, 454-7659

JOHN E. CARTER, M.D., P.A.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery

7711 Louis Pasteur Drive, San Antonio, Texas 78229
Telephone: (Area Code 512) Office 696-2390 Medical Exchange 227-6331

JOSEPH C. FORD, M.D., P.A., F.A.C.S.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery
Plastic Surgery

508 Madison Square Medical Building
311 Camden, San Antonio, Texas 78215, 224-5509

BROMLEY S. FREEMAN, M.D., F.A.C.S.
D. ROBERT WIEMER, M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery
Plastic & Reconstructive Surgery

7000 Fannin, Suite 1770, Houston, Texas 77025
713 795-5584

JACK L. CONLEE, M.D.
Diplomate American Board of Plastic Surgery
Plastic and Cosmetic Surgery

3318 S. Alameda, Suite 1, Corpus Christi, Texas, 855-7359

PLASTIC SURGERY ASSOCIATION
LEONARD KOCH, M.D.
Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410, 806 792-2313

ROBERT L. CLEMENT, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive Surgery

1111 West 34th Street, Suite 205, Austin, Texas 78705, 512 459-3101

STEPHEN C. LESAUVAGE, M.D.
Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1318 Clinic Drive, Tyler, Texas 75701; 214 593-8296

JOSEPH P. FLEMING, M.D., F.R.C.S.(C), F.A.C.S.
Plastic and Reconstructive Surgery

1213 Hermann Drive, Suite 645, Park Plaza Professional Building
Houston, Texas 77004; 713 524-7545

JUDSON L. CROW, M.D.
Diplomate, American Board of Surgery
Diplomate, American Board of Plastic Surgery
Plastic and Reconstructive Surgery

730 N. Main—Suite 716, San Antonio, Texas 78205, 512 224-2075

Psychiatry

Perry C. Talkington, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Larry R. Kimsey, M.D.
Charles M. Smith, M.D.
Gregory G. Dimijian, M.D.
Linda R. Hughes, M.D.
Roy H. Fanoni, M.D.
Byron Howard, M.D.
Larrie W. Arnold, M.D.
Madeline W. Harford, M.D.
John G. Looney, M.D.

Practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

PERRY C. TALKINGTON, M.D.
Psychiatry

4645 Samuell Blvd., Dallas, Texas 75228, 214 381-3849

FABRE CLINIC

LOUIS F. FABRE, JR., M.D., Ph.D.
Certified in Psychiatry by the American Board of Psychiatry and Neurology
Individual and Group Psychotherapy
Children — Family — Alcoholism

Free of charge to patient MEDICATION CLINIC
FOR PATIENTS WITH ANXIETY OR DEPRESSION
IN CONJUNCTION WITH CNS RESEARCH WITH
PSYCHOPHARMACOLOGICAL COMPOUNDS

DAVID McLENDON, Ph.D.
Licensed Clinical Psychologist
Individual and Group Psychotherapy
Diagnostic Evaluations and Counseling

H. JOHN JACKSON, Ed.D.
Educational Psychologist
Administrative Consultation to School District
Program Organization Consultation
Individual Family Counseling

5503 Crawford Street, Houston, Texas 77004, 713 526-2328

ATTEND THESE TMA MEETINGS IN 1978

- Conference on Legislation, Jan. 21, Austin
- Annual Session, May 10-14, San Antonio
- Conference on Medical Service, Sept. 23, Austin

HARRIS HAUSER, M.D. AND ASSOCIATES
Psychiatry

Frank H. Chesky, M.D.
Jose A. Gutierrez, M.D.
Harris M. Hauser, M.D.
Linda S. Blume, A.C.S.W.

7777 Southwest Freeway, Suite 1004, Houston, Texas 77074; 713 772-4600

1740 West 27th, Suite 315, Houston, Texas 77008; 713 772-4600

Psychiatry & Neurology

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., J. J. Leyva, M.D.

Department of Psychology
Allen Goss, Ph.D., Jim M. Phillips, Ph.D.
Practice Limited to Neurology and Psychiatry
Office Hours By Appointment
First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

STEPHEN WEISZ, M.D.
Practice Limited to Neurology and Psychiatry

836 Locke Medical Building, 6011 Harry Hines Blvd.,
Dallas, Texas 75235, 214 688-0344

THE FORT WORTH NEUROPSYCHIATRIC CENTER
*Herbert G. Rush, M.D.
A. Arauzo, M.D.
Sanford Lehrer, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

*Diplomate American Board of Psychiatry and Neurology

H. KORNBLIT, M.D.
Neurology—Headache Clinic

Memorial City Prof. Bldg. #176
902 Frostwood, Houston, Texas 77024

HAUSER CLINIC
Psychiatry and Neurology

Section of Psychiatry
*Abe Hauser, M.D.
*Robert I. Hauser, M.D.
*H. James Stuart, M.D.
*Javier A. Zapata, M.D.
*Susan B. Darsey, M.D.
*Harvey A. Rosenstock, M.D.
*Cal K. Cohn, M.D.

Section of Neurology
*Gerald Ratinov, M.D.

Section of Social Work
Pamela Plimmer, A.C.S.W.
Marguerite Papademitriou, A.C.S.W.
Wendy Smolins, M.S.S.W.

Administrator
Richard J. Kurzenberger

7777 Southwest Freeway, Suite 1036, Houston, Texas 77074
Telephone 713 776-8600

*Diplomate, American Board of Psychiatry and Neurology

TMA Action/TMA Legislative Bulletin
. . . Another service of your association

MEMORIAL NEUROLOGICAL ASSOCIATION
Neurology, Electroencephalography, Electromyography and C. T. Scan

James L. Frey, M.D.
Harris M. Hauser, M.D., F.A.A.N.
Cheor J. Kim, M.D.
Lorenzo Lorente, M.D.

1740 West 27th, Suite 315, Houston, Texas 77008, 713 861-4516
427 West 20th, Suite B100, Houston, Texas 77008, 713 868-4552
7777 Southwest Fwy., Suite 1004, Houston, Texas 77074, 713 772-4600

HAUSER PSYCHIATRIC ASSOCIATES
Psychiatry and Neurology
*Ronald J. Hauser, M.D., F.A.P.A.

Individual and Group Therapy
Marital and Family Counseling

Laurence J. Gross, M.S.W., S.P.
Judy Kanas, M.S.W., S.P.

*Diplomate, American Board of Psychiatry and Neurology

9100 Westhelmer, Suite 40
Houston, Texas 77063; 781-6742

ROBERT R. PIERCE, M.D., P.A.
Diplomate (Neurology) American Board of Psychiatry and Neurology

Neurology and Electroencephalography

Medical Towers Building, Suite 608, 6608 Fannin, Houston, Texas 77030
713 795-4163

Radiology

ROYAL WERTZ, M.D., F.A.C.R.
Practice Limited to Radiology

800 Rusk Street, Amarillo, Texas 79106, 373-8324

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D., D.A.B.R.

RADIOLOGY
109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

KARL THORD DOCKRAY, M.D.
Diplomate, American Board of Nuclear Medicine
Diplomate, American Board of Radiology

Roentgenology, Nuclear Medicine, Xeromammography

763-5774 Office 765-7701 Page 762-0471 Mobile
Lubbock, Texas

SRINI MALINI, M.D.

Diagnostic Ultrasound

1513 Medical Towers Bldg., Houston, Texas 77030, 713 795-5672

Texas Continuing Education Directory
. . . Another service of your association

Rheumatology

DON E. CHEATUM, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Rheumatology
CARLOS M. KIER, M.D.
Diplomate American Board of Internal Medicine
Rheumatology Consultation by Physician Referral
Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204, 823-4151

ROY M. FLEISCHMANN, M.D.
Diplomate American Board of Internal Medicine and Rheumatology
Rheumatology Consultation by Physician Referral
3707 Gaston Avenue, Suite 810, Dallas, Texas 75246; 827-0868

Thoracic Surgery

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.
Maruf A. Razzuk, M.D.
DRS. PAULSON, URSCHEL, RAZZUK AND ASSOCIATES
Thoracic and Cardiovascular Surgery
1201 Barnett Tower
3600 Gaston Avenue, Dallas, Texas 75246; 824-2503

JOHN L. KEE, JR., M.D.
Thoracic Surgery
The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246; 826-5184

ALLAN L. GRAHAM, M.D., F.A.C.S.
KARAMAT U. CHOUDHRY, M.D., F.A.C.S.
Diplomates American Board of Surgery and Board of Thoracic Surgery
ROBERT W. MILEY, M.D.
Diplomate American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
800 Eighth Ave., Suite 626, Fort Worth, Texas 76104: 332-7878

HECTOR O. YANES, M.D., P.A., F.A.C.S., F.A.C.C.
Cardiac, Vascular and Thoracic Surgery
Diplomate American Board of Surgery and
American Board of Thoracic Surgery
432 Medical Plaza, 800 Eighth Ave.,
Fort Worth, Texas 76104, 332-1947

RICHARD E. WOOD, M.D.
Cardiac, Thoracic and Vascular Surgery
Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890
Hours By Appointment

Hugh E. Wilson, M.D. and Associates
HUGH E. WILSON, M.D.
CHARLES T. MEADOWS, M.D.
Thoracic and Cardiovascular Surgery
6161 Harry Hines Boulevard
Dallas, Texas 75235; 214 637-3470

"Every man owes some of his time to the upbuilding of his profession"
—Theodore Roosevelt
Take an active role in TMA and your county society.

Urology

JO C. ALEXANDER, M.D., FOSTER FUQUA, M.D., ELGIN W. WARE, JR., M.D., GEORGE E. HURT, JR., M.D., DONALD E. JOHNSON, M.D. & ASSOCIATES
L. MICHAEL GOLDSTEIN, M.D., THOMAS P. REILLY, M.D.
Urology
3600 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC
Dolphus E. Compere, M.D., F.A.C.S.
Grant F. Begley, M.D., F.A.C.S.
Hugh Lamensdorf, M.D., F.A.C.S.
Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109
817 336-5711

H. M. GIBSON, JR., M.D., F.A.C.S.
ABEL GARDUNO, M.D.
Certified by American Board of Urology
Practice Limited to Urology
512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephone 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
NEWTON F. McDONALD, M.D.
JAMES E. MORNEAU, M.D.
Practice Limited to Urology
1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

DONALD J. NEESE, M.D.
Diplomate of American Board of Urology
Practice Limited to Urology
570 Park Plaza Professional Building
1213 Hermann Drive, Houston, Texas 77030; 713 524-3931
400 Medical Center Blvd., Suite 207, Webster, Texas 77598; 713 332-2466

EUGENE R. TODD, M.D., P.A.
Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology
Urology—Adult and Pediatric
3434 Swiss Ave., Suite 406, Dallas, Tex. 75204, 214 826-3500

DALLAS UROLOGY ASSOCIATES
David D. Reisman, M.D.
Donald J. Logan, M.D.
Allen S. Plotkin, M.D.
Donald L. McKay, M.D.
Practice Limited to Urology
Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

JOSEPH D. MITCHELL, JR., M.D.
TROY W. SCOTT, M.D.
Urology
Barnett Tower, Suite 906, Baylor Medical Plaza,
3600 Gaston Avenue, Dallas, Texas 75246

Cassette tapes now available of the TMA's 1977 Conference on Medical Service!

For additional information and order form, write TMA Communication Department, 1801 North Lamar Blvd., Austin, Texas 78701.

Big Balanced Rock, Chiricahua Mountains, Arizona (approx 1,000 tons)

■ **Most Widely Prescribed**—Antivert is the most widely prescribed agent for the management of vertigo* associated with diseases affecting the vestibular system such as Menière's disease, labyrinthitis, and vestibular neuronitis.

■ **Relief of Nausea and Vomiting**—Antivert/25 can relieve the nausea and vomiting often associated with vertigo.*

■ **Dosage for Vertigo*** —The usual adult dosage for Antivert/25 is one tablet t.i.d.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25

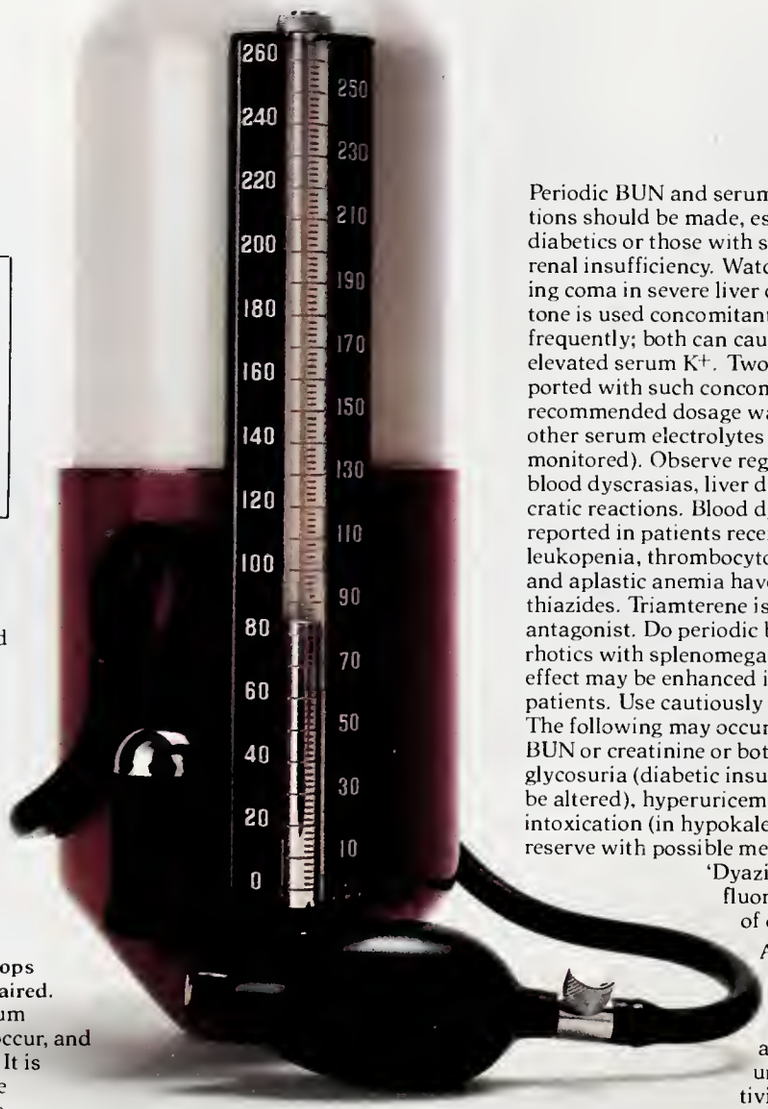
(meclizine HCl) 25 mg. Tablets
for vertigo*

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE



Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* **Warning**
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

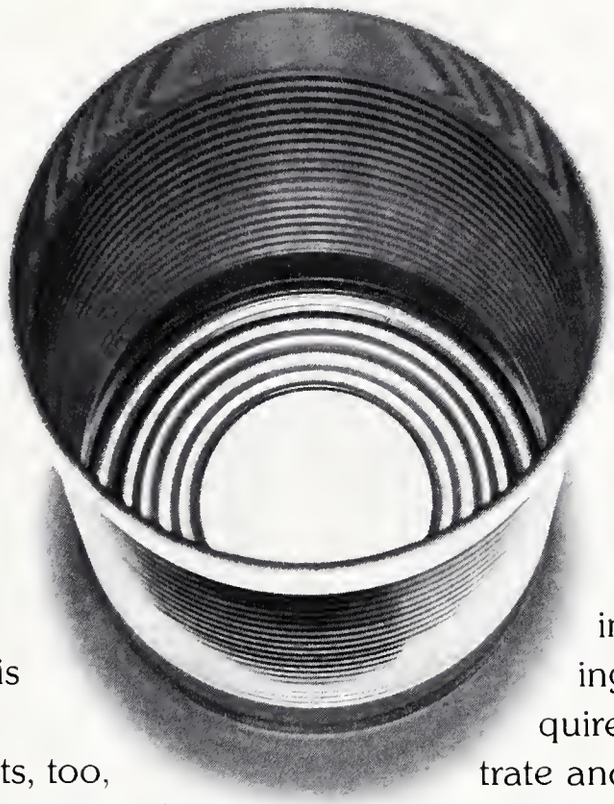
Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

FOR LONG-TERM CONTROL OF HYPERTENSION.* SERUM K^+ AND BUN SHOULD BE CHECKED PERIODICALLY. (SEE WARNINGS SECTION.)

SK&F CO., Carolina, P.R. 00630

SK&F CO.
a SmithKline company

NOW a two-piece 14oz. can for Soyalac



A two-piece can means no soldered seam. No solder means no possibility of lead contamination from the container. Soyalac is the first infant formula with this packaging innovation.

There are improvements, too, in the formulation. Soyalac now has 25% more iron than known competitive hypoallergenic milk-free formulae. In fact, the entire formula has been slightly modified to reflect the current U.S. RDA levels set by the Food and Drug Administration.

Soyalac—formula for infants on regular feeding and for those who require milk-free diets; concentrate and single strength, ready-to-use. Made from the whole soybean. I-Soyalac concentrate, made from soy isolate, with no soy carbohydrates and **no corn products.**

For detailed information and samples call or write:

Western U.S.
LOMA LINDA FOODS
11503 Pierce Street
Riverside, CA 92515
(714) 785-2444

Eastern U.S.
LOMA LINDA FOODS
13246 Wooster Road
Mount Vernon, OH 43050
(614) 397-7077

Loma Linda®

B.W.CO.® HAS PUT MORE POTENCY IN THE LINE

EMPRACET™ with Codeine Phosphate, 60 mg, No. 4 Ⓒ III

EMPRACET™ with Codeine Phosphate, 30 mg, No. 3 Ⓒ III

CONTRAINDICATIONS: Hypersensitivity to acetaminophen or codeine.

WARNINGS: Drug dependence. Codeine can produce drug dependence of the morphine type and may be abused. Dependence and tolerance may develop upon repeated administration; prescribe and administer with same caution appropriate to oral narcotics. Subject to the Federal Controlled Substances Act.

Usage in ambulatory patients. Caution patients that these products may impair mental and/or physical abilities required for performance of potentially hazardous tasks such as driving a car or operating machinery.

Interaction with other CNS depressants. Patients receiving other narcotic analgesics, general anesthetics, phenothiazines, tranquilizers, sedative-hypnotics, or other CNS depressants (including alcohol) may exhibit additive CNS depression; when used together reduce dose of one or both.

Usage in Pregnancy. Safe use is not established. Should not be used in pregnant patients unless potential benefits outweigh possible hazards.

PRECAUTIONS: Head injury and increased intracranial pressure. Respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a pre-existing increase in intracranial pressure. Narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.

Acute abdominal condition. These products or other narcotics may obscure the diagnosis or clinical course of acute abdominal conditions.

Special risk patients. Administer with caution to certain patients such as elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, or prostatic hypertrophy or urethral stricture.

ADVERSE REACTIONS: Most frequently include lightheadedness, dizziness, sedation, nausea, and vomiting; more prominent in ambulatory than in nonambulatory patients; some may be alleviated if patient lies down; others include: euphoria, dysphoria, constipation and pruritus.

DRUG INTERACTIONS: CNS depressant effect may be additive with that of other CNS depressants. See Warnings.

For symptoms and treatment of overdosage and full prescribing information, see package insert.

Introducing EMPRACET® c̄ CODEINE #4

Each tablet contains: codeine phosphate, 60 mg (1 gr) (Warning—may be habit-forming); and acetaminophen, 300 mg. Ⓒ III

Our new non-aspirin/ codeine analgesic for moderate to severe pain.

New peach-colored Empracet c̄ Codeine #4 offers a potent alternative for patients in whom aspirin is not indicated.

Unlike compounds containing oxycodone which afford comparable analgesia, new Empracet c̄ Codeine #4 gives you CIII prescribing convenience—up to 5 refills in 6 months at your discretion (where state law permits). And, prescribing by telephone is permissible in most states. Moreover, new Empracet c̄ Codeine #4 has less addiction potential than does oxycodone.

For those of your patients requiring a less potent analgesic, non-aspirin Empracet® c̄ Codeine #3 provides effective relief of moderate pain.

Burroughs Wellcome Co. makes codeine combination products. You make the choice.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Classified Advertising

Physicians Wanted

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from the big city problems. Call collect Dr. David M. Pogue, at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIAN AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6383.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

EMERGENCY DEPARTMENT GROUP, HOUSTON AREA, EXPANDING—choice of salary or fee-for-service with guarantee—malpractice paid—Call 713-861-7942 or write Greater Houston Emergency Physicians Association, 625 West 19th, Houston, Texas 77008.

FAMILY PRACTICE—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas 512-672-2811.

FAMILY PRACTITIONER WANTED to join two established family practitioners in Trinity, Texas. Former partner is leaving November 1976 for residency. A large ready made practice is available now. You are invited to investigate clinic and hospital facility, compatibility, economic and environment of rural practice in an outstanding recreational area that includes 2,000,000 acres of East Texas forest, 90,000 acre Lake Livingston, various golf courses, marinas, and country club developments. All guarantees, etc. are negotiable. Bring your wife. Sam R. Barnes, M.D. and J. Richard Cook, M.D., P.O. Box 672, Trinity, Texas 75862.

GENERAL PRACTITIONER NEEDED: To work with general surgeon doing GP work. Excellent opportunity for a doctor desiring family practice work. May start with salary of $45,000 per year negotiable. City has population of 9,000 with trade area of 25,000 to 30,000. Contact Chris S. Cruzcosa, M.D., 300 S. 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

GENERAL SURGEON: American graduate, preferably just out of residency to do all major surgery for well established clinic. Please reply to Ad-722, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTICE, GENERAL PRACTICE—Wanted immediately to join physician staff in rural community one-hour from Dallas-Fort Worth area. Extremely active practice with good benefits and an opportunity to enter into the corporation. Practice is with physicians clinic, 26-bed hospital, and 42-bed nursing home within the same building complex. Excellent arrangement for family practice. For further information contact Roger E. Marks, M.D., 817-897-2215 or 817-897-4436; Glen Rose, Texas.

GENERAL INTERNIST AND FAMILY PRACTITIONER NEEDED to join nine man group in Clifton, Texas. Located in the heart of Texas, 30 miles NW of Waco; 15 miles from Lake Whitney. Good fishing; excellent hunting; new modern golf course. Excellent schools and churches in a growing progressive community and directly associated with a 75 bed, Hill Burton hospital which is fully accredited by the joint commission. Terms open at first with partnership in future. Please contact V. D. Goodall, M.D., Clifton Medical & Surgical Clinic Association, Clifton, Texas 76634. Telephone 817-675-8621 or 675-3113.

PUBLIC HEALTH DIRECTOR: The City of Austin, Texas, is accepting applications for the position of Director, Austin-Travis County Health Department. Full medical and administrative direction of local public health activities in a $4 million department of the City. Must be an MD with administrative experience; Texas license and MPH preferred. Salary starts at $35,000+, depending upon qualifications. Send resume to: Dan H. Davidson, City Manager, P.O. Box 1088, Austin, Texas 78767; 512-477-6511. Equal employment opportunity.

PHYSICIANS WANTED—Growing hospital in progressive East Texas town near metroplex needs ambitious physicians to join staff. Write Paul Bennet, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75647.

INDUSTRIAL PHYSICIAN TO JOIN multispecialty group as an addition to a large industrial department. Some surgical training desired; family practice boards acceptable. Work consists of pre-employment physicals, industrial injuries, and family practice. Salary and partnership negotiable and competitive. Keogh plan available. Adequate time off. Modern clinic facilities. Growing town of 125,000. Send curriculum vitae and references to Harry Ledbetter, M.D., 1518 Tenth Street, Wichita Falls, Texas 76301.

TEXAS, NORTHEAST: Emergency physicians. Immediate openings available in established ACEP oriented group. Positions in several communities available. Prefer career-oriented emergency MDs. Additional training and/or experience required. Flexible schedule, fee-for-service with guarantee and usual fringes including malpractice insurance. Write: Emergency Medicine Consultants, 3600 Gaston Avenue, Dallas, Texas 75246, or call 214-823-6850.

HOUSTON EMERGENCY PHYSICIANS ASSOCIATES has immediate openings for career oriented emergency physicians with surgical or emergency medicine backgrounds. Continuing education required. Teaching and non-teaching positions available in the city limits of Houston, Texas. Our physicians' present salaries are between $50,000 and $80,000 per annum based on tenure and experience. Flexible scheduling to allow for vacations and continuing education. Benefits include malpractice insurance, major medical, life, disability income. Call or send CV: Houston Emergency Physicians Associates, P. O. Box 36949, Houston, Texas 77036; 713-776-1081.

PRIMARY CARE POSITIONS available immediately. Assistance with travel, office overhead, and salaries or guarantees negotiable. For details send CV and preferences to Ad-725, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

NEED FULL TIME PHYSICIAN at medical facility of Gary Job Corps Center in resort community of San Marcos, Texas. Involvement is 8 a.m. to 5 p.m., Monday through Friday and on call alternate nights and weekends. Fringe benefits include a desirable housing arrangement and prepaid malpractice insurance. Salary upper $30s and negotiable. Contact Dr. M. D. Heatly, 512-396-6570 or at night 392-3044; or Mr. Al Martinez, Hospital Administrator, 396-6422; or write P.O. Box 645, San Marcos, Texas 78666.

INTERNIST—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

THE HILLS OF HOME IS THE TITLE OF A BEAUTIFUL Scottish song. It is especially applicable to East Texas. Are you tired of traffic congestion, high overhead, hassles with office personnel, high crime rates? Do you long to own a farm or ranch of your own where you can enjoy nature? If so, write us as we are taking application from licensed physicians and psychiatrists. Our hospital is modern, JCAH approved, and program oriented. Salaries: Physicians, $32,800-35,800, depending on qualifications; Psychiatrists, $35,800-43,800, depending on qualifications. Housing available on the grounds. Contact Rusk State Hospital, Box 318, Rusk, Texas 75785; Dave Everly, 214-683-3411. An equal opportunity employer.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $10.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

TEXAS PRACTICES. Economic and professional climate excellent. Have requests from physicians in Texas communities for additional physicians, usually in the same field. City suburbs, small and medium size towns. Attractive financial guarantees. No fee to physician candidate. Please write with C.V. and preferences to Sanford Smith, Professional Practice Management, Inc., 1102 Kingwood Drive, Humble, Texas 77339.

TEXAS, NORTH CENTRAL. Emergency physicians needed August 1, 1977 to complete full-time group in a 177-bed hospital. Excellent staff back-up. Small town near Dallas. Numerous recreational opportunities nearby. Call Kalman Shwarts, M.D., 214-872-5011 or 214-874-5611, ext. 300.

GENERAL PRACTITIONER TO DIRECT ALCOHOLISM PROGRAM. Building a better and more dynamic program in state hospital. Ideal family living town of 30,000—good schools, recreation, mild west Texas weather. Salary $37,000 to $40,000. Texas license required. Call or write: Douglas Cheney, Personnel Director, Big Spring State Hospital, Box 231, Big Spring, Texas 79720. 915-267-8216.

PRACTICE in the most sophisticated Texas city. Enjoy the small town atmosphere. Explore Pleasant Grove Hospital, first medical facility ever for 170,000 citizens in Southeast Dallas County. 172-bed hospital, now open, adjacent to professional building due completion September. Explore the possibilities with A. D. Hethcock, 214-398-1531.

DIAGNOSTIC RADIOLOGIST—trained in nuclear medicine, angiography, ultrasound to fill opening in four member radiology group with office and two hospitals in Lower Rio Grande Valley. Attractive fringe benefits and salary leading to full partnership. Send curriculum vitae. Drs. Martin, Chapa, Baker and Sokolosky, 1616 Ed Carey Drive, Harlingen, Texas 78550.

CHILD PSYCHIATRY RESIDENCY may be taken before or after Adult Psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psychopharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services, and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed inpatient unit for children. Liaison with graduate schools, medical school and community programs. Stipends: first year, $15,000; second year, $16,000; third year, $17,000; fourth year, $18,000. Contact Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

PSYCHIATRIC RESIDENCY IN APPROVED three-year program. Effective connections with universities, medical schools, private clinics and community centers. Outstanding faculty and programs. Stipends with Texas license are $15,000, $16,000 and $17,000 per year. In addition, now offering residency in child psychiatry. For full information, write to: Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

EXPANDING MEDICAL CLINIC has opening for internal medicine, OB-GYN and family practice. Apply: D. McCann, 2616 North Oregon, El Paso, Texas 79902; telephone 915-532-5232.

CARDIOLOGIST - ONCOLOGIST/HEMATOLOGIST - GENERAL INTERNIST & PULMONARY medicine specialist needed to add to our 9-doctor IM group practice. We are a referral practice in new office, with new equipment adjacent to a private hospital. The hospital has a new Cath. Lab and CT scanner. Attractive financial incentive plan. Send CV to Robert L. Hatcher, M.D., Valley Diagnostic Clinic, 2121 Pease St., Harlingen, Texas 78550; 512-425-7200.

UNIVERSITY HEALTH SERVICE—DIRECTOR/STAFF. Needed, Director for Health Service, University of Texas Health Science Center at Houston. Staff physician also needed. Faculty rank Department of Family Practice of medical school. Specific patient care responsibilities for students and employees with emphasis on prospective medicine and those health maintenance programs as teaching and research models. Patient population about 8,000. Challenging opportunity. Salary competitive. Excellent fringe benefits including payment of malpractice insurance. Inquire: Chairman, Department of Family Practice, The University of Texas Medical School at Houston, Memorial Hospital, 7600 Beechnut, Houston, Texas 77074. Telephone 713-776-5160. Equal employment opportunity/affirmative action employer.

POSITIONS VACANT FOR TEXAS: Surgeon with thoracic surgery training wanted to join a busy solo practice summer of 1978. Opportunity to do general surgery while building up a thoracic practice. Board eligibility in general surgery required. Eligibility for thoracic surgery preferred. Please reply to Ad-735, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTITIONER AND PEDIATRICIAN NEEDED to join multi-specialty group in west Texas city of 175,000. New clinic and hospital facilities. Top salary with partnership opportunity. University Medical Surgical Clinic, 6602 Quaker Avenue, Lubbock, Texas 79414.

LOCATION AVAILABLE FOR GENERAL PRACTICE, wish to retire, will introduce. Contact M. C. Rittiman, M.D., 209 East Market Street, Sinton, Texas 78387; telephone 364-1201 or 364-2421.

INTERNAL MEDICINE/CARDIOLOGY—64 bed hospital in East Texas area with new fully equipped cardio-pulmonary department. Please contact Paul Bennett, Administrator, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75647; 214-845-2281.

UNUSUAL PRIVATE PRACTICE OPPORTUNITITES now available in general practice and internal medicine, not cardiology oriented. Opportunities available in a 158-bed proprietary hospital, physician owned and operated. Medical success in your practice guaranteed by cash of $5,000 per month for a period of six months. Free rent and other benefits also included. Pasadena, Texas, is a progressive city of 150,000 located as a suburb of Houston, Texas, near the Johnson Space Center. Community enjoys high per capita earnings, open staff policies, and unlimited medical opportunities. Applications will be restricted to aggressive and American-trained physicians only. For additional information, write or call Richard Fly, Administrator, Pasadena General Hospital, 1004 Seymour, Pasadena, Texas 77506. Telephone 713-473-1771.

INDUSTRIAL PHYSICIAN NEEDED by multispecialty group. Large industrial practice. Five weeks vacation, malpractive insurance paid, rotating coverage. Call Rodney Bobbitt, M.D., 915-592-0201, ext. 1680, El Paso, Texas.

EMERGENCY DEPARTMENT STAFF PHYSICIAN AT MEDICAL CITY DALLAS HOSPITAL. Excellent facilities and back-up. Flexible scheduling. Minimum guarantee/fee for service. Contact Ronald Hellstern, M.D., Emergency Department, P.O. Box 5999, Dallas, Texas 75222; 214-522-5481.

BOARD CERTIFIED FP NEEDS ASSOCIATE for active practice. Across street from 160 bed hospital. Own lab and x-ray. All specialties available, full privileges. College town, deep east Texas. Forests and lakes for recreation. Fast growing area with diversified economy. Terms negotiable. Ralph C. Bailey, M.D., 1209 N. Mound Street, Nacogdoches, Texas 75961; telephone 713-564-3731.

INTERNIST—Pine hills of East Texas. Thriving city of 65,000. Extraordinary cultural and recreational activities. Medical center of East Texas. Nine man group—three GP, three IM, three surgeons. Please contact Robert Felix, Administrator, Medical & Surgical Clinic, P.O. Box 6026, Tyler, Texas 75711; phone 214-593-1721.

NEED GENERAL INTERNIST AND GYNECOLOGIST for multispecialty group in the heart of Texas. Drawing area 40,000. Ideal working conditions with new hospital adjacent to new clinic. Perfect setting to enjoy life and to raise children. Golf and hunting excellent, fishing nearby. Contact Harald Frieser, The Gatesville Clinic, 227 Memorial Drive, Gatesville, Texas 76528; 817-865-8201.

GENERAL SURGEON TO ASSOCIATE with multispecialty group in central Texas. Partners are tired of doing surgery. Hospital and clinic are well-equipped and conveniently located. All guarantees are negotiable. Please reply to Ad-747, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTITIONER NEEDED by multispecialty group. Rotating coverage. Five weeks vacation, malpractice insurance paid. Call Rodney Bobbitt, M.D., 915-592-0201, ext. 1680, El Paso, Texas.

SURGEON—Board certified or eligible wanted to join 12 physician multispecialty group: in an area serving 45,000 people within Dallas-Fort Worth Metroplex. Excellent hospital and community facilities. Financial arrangements dependent on ability, training and boards. Call 817-295-2021 or send resume to P.O. Box 157, Cleburne, Texas 76031.

ORTHOPEDIST—Board certified wanted to join 12 physician multispecialty group: in an area serving 45,000 people within Dallas-Fort Worth Metroplex. Excellent hospital and community facilities. Financial arrangements dependent on ability, training and boards. Call 817-295-2021 or send resume to P.O. Box 157, Cleburne, Texas 76031.

INTERNIST—Board certified or eligible wanted to join 12 physician multispecialty group; in an area serving 45,000 people within Dallas-Fort Worth Metroplex. Excellent hospital and community facilities. Financial arrangements dependent on ability, training and boards. Call 817-295-2021 or send resume to P.O. Box 157, Cleburne, Texas 76031.

PHYSICIAN WANTED TO SHARE office in Houston—any internist, endocrinologist, general practitioner, so forth. Office location near medical center. For information, please write Resident Room: E307, 2408 South Voss Road, Houston, Texas 77057; or call 713-527-5658; after 8 p.m. 713-784-5021.

ARE YOU TIRED OF THE FRUSTRATIONS of pediatric practice and are interested in practicing allergy under a Board-Certified Allergist? If so, write P.O. Box 1761, Austin, Texas 78767. Please enclose a curriculum vitae.

Situations Wanted

DIAGNOSTIC RADIOLOGIST AVAILABLE January 1978. Will have completed University of Tennessee residency program including training in angiography, ultrasound and C.T. Seek practice opportunity in Central Texas. Write or call William Healy, M.D., 145 S. Greer, Memphis, Tennessee 38111. Phone 901-323-3737.

SEEKING LOCATION. 33 years old, board eligible internist-nephrologist. Just finished residency in June 1977. Looking for group, solo, hospital based practice, associateship in nephrology preferably in a setting of hemodialysis unit. Will do internal medicine also. Available now. Please contact M. Ganesharajah, M.D., 50 South Munn Avenue, #420, East Orange, New Jersey 07018.

GENERAL SURGEON, Canadian, university affiliated. American board certified with 12 years experience in general and peripheral vascular surgery wishes to relocate. Contact Ad-737, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FMG from University of Mexico. Board eligible general surgeon with board experience in general practice. Interested in southwest Texas, doing general surgery alone if necessary, general practice, too. Group practice is preferred. All locations considered. Contact Ad-738, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED: Position by retired unlicensed MD who needs to work. Prefer to work in family practice, medical, and/or emergency types. Good training. Can get along well with patients and physicians. Last practice 1974. Good health, no disability. No tobacco, alcohol or drugs. Will relocate. 512-447-1745. 900 South Lamar, #309, Austin, Texas 78704.

UROLOGIST, age 31. Will complete 5 year program June 1978. Board eligible, FLEX, available July 1978. Seeking solo, association, partnership, group or clinic practice in Texas. Please reply to Ad-742, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST PULMONARY: 33, board qualified, university trained. Private practice experience. Will do internal medicine and pulmonary medicine. Available January 1978. Reply to Charles Zavala, M.D., 2728 Oak Road, #138, Walnut Creek, California 94596.

PSYCHIATRIST, young, board certified, seeks solo or multispecialty group practice. Experienced in both electromyography and rehabilitation. Please reply to Ad-746, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OB-GYN FAMILY PLANNING NURSE PRACTITIONER. 2 years experience. Now learning colposcopy. Desires position with a private physician in Houston area whose practice has grown too large. Please reply to Ad-750, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN: 31 year old, board certified, well trained and experienced in the U.S. Excellent references. Seeks practice opportunity—solo, group, partnership or institution in metropolitan Houston, Dallas, Fort Worth or Austin. Available December 1977/January 1978. Please reply to Ad-744, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

32 BAYLOR COLLEGE OF MEDICINE STUDENTS graduating on November 18, 1977—and many looking for interim positions between graduation and residency which begins in July 1978. Salary negotiable. Address correspondence to November Graduates Committee, Attention Dr. Major Bradshaw, Dean, Office of Student Affairs, 1200 Moursund, Houston, Texas 77030; 713-790-4600.

SEEKING LOCATION: Third year pediatric resident at University of South Florida desiring private or group practice position in central, east, or southeast Texas; also would consider El Paso. Former Texas resident and 1975 graduate of The University of Texas Southwestern Medical School. Have Texas license. Please reply to Ad-743, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD ELIGIBLE ANESTHESIOLOGIST with 14 years of practice in Michigan wants to relocate in Texas, preferably in medium size university city. Just got Texas license and can be availible soon. Please reply to Ad-745, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, 36, completing military obligation January 1978, would like to locate a position in the private or group practice of general surgery. Training completed University of Minnesota 1975, certified by American Board of Surgery 1977. All positions considered. Curriculum vitae available upon request. Maj. John Hornung, M.D., Berlin MEDDAC, APO New York 09742.

PEDIATRICIAN, FMG, Board certified and university trained. Extensive practice and teaching experience in pediatric and adolescent medicine. Will consider some family practice. Excellent references, desire associate, group or hospital based practice in suburban metropolitan city or medium sized community. Available any time. Please reply to Ad-748, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701,

ANESTHESIOLOGIST: 48, board eligible, wide experience. Eight years anesthesia, four years in England D.A. (Royal College). Available June 1978. Group or fees for service. Please reply to Ad-703, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy, laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

AUSTIN—NEW PROFESSIONAL PARK. Int. Med., GP, FP, Peds, OB/GYN, ENT, Radiologist to associate in group setting for solo practice. University town, new hospital. Cannon Professional Park, 1110 William Cannon Drive, Austin, Texas 78745. Telephone 512-451-8484 or 512-444-1954.

FOR SALE OR LEASE: Busy general practice office, with or without furniture and/or equipment, located in Robstown, Texas. Panelled interior, approximately 1250 sq. ft. containing three treatment rooms, one lab (dark room only), large reception room, business office, one large bathroom, three closets, numerous built-in cabinets, tile flooring, one doctor's office carpeted. Good condition. If interested contact Mr. John North, 512-883-9387 or call 512-853-1531 for information.

ARLINGTON MEDICAL PLAZA IS EXPANDING. Physicians—all specialties needed to help serve rapidly growing city. Ideal location for solo practice. We have radiology, diagnostic lab, physiological testing lab, and pharmacy. Our 20 busy physicians would welcome you. Hadley Upton, 801 Road to Six Flags West, #111, Arlington, Texas 76012: 817-265-4152.

MEDICAL EQUIPMENT FOR SALE: Examining table, stool, Mayo stand, drug and supply cabinet, desk, IBM Selectric I typewriter with typing stand, lite vaginal speculum, and assorted surgical instruments. For more information call 713-334-1229.

Business and Financial Services

PERSONAL FINANCING AND BUSINESS LOANS $5,000 to $50,000. Use for starting or expanding practice, equipment purchase, investment or debt consolidation. All details arranged by mail to your home or office. Write: Vern Britton, President, Financial Resources Co., Box 502-T, Richmond, Virginia 23204 or call 804-262-5969.

SHOULD GEMS BE PART OF YOUR INVESTMENT PLANNING? Write for our free brochure on the pros and cons of investing in gems. Researched and written by experienced professionals in mining, gems, economics and finance. In this day of irresponsibile jury awards, gems, with the liquidity of cash, may be an answer to planning your family's financial security. Write Dr. A. A. Mallas, Jr., President, Kashan, Inc., P.O. Box 3318, Austin, Texas 78764, or call 512-327-2683.

Miscellaneous

WANT TO PURCHASE—used office equipment suitable for family practice. Any and all equipment needed. Please reply to Ad-749, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251. (Formerly HOME OF THE HOLY INFANCY)

Subscriptions Available to

Printed Protocols for

MEDICAL GRAND ROUNDS

(Parkland Memorial Hospital)

University of Texas Health Science Center at Dallas
Southwestern Medical School

Cost: $120 per year, covering 40-45 protocols, mailed weekly

Send check payable to **UT Health Science Center at Dallas** and your mailing address to:

Medical Grand Rounds (T)
Dept. of Internal Medicine, UTHSCD
5323 Harry Hines Boulevard
Dallas, TX 75235

Advertising Directory

American Physicians Insurance Exchange	29-40
Arlington Neuropsychiatric Center	33
Beverly Hills Hospital	17
Blue Cross-Blue Shield of Texas	5
H. E. Eugene Bonham, M.D.	45
The Brown Schools	33
Burroughs Wellcome	116
Comatic Laboratories	3rd Cover
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
Financial Management, Joseph J. Tallal, Jr.	102
Flint Laboratories	95-96
Gentec Hospital Supply Company	64
Insurance Corporation of America	85-87
Mead Johnson Laboratories	32
Kelsey-Seybold Clinic	75
Eli Lilly and Company	48
Loma Linda	115
Medical Arts Clinic of Corsicana	45
The Medical Protective Company	75
Medical Grand Rounds	119
National Mediquip, Inc.	4
New Orleans Graduate Medical Assembly	38
Nuclear Diagnostics	17
Park North General Hospital	121
Pennwalt Corp.	66-67
Professional Systems & Services	33
The Prudential Insurance Company of America	9
A. H. Robins Company	29-31
Roche Laboratories	1,2,41,68-69
Roerig & Co.	18-19,113
Scott and White Clinic	Back Cover
Sexuality Concepts, Inc.	33
Smith Kline & French	114
Southern Medical Association	12
Starlite Village Hospital	121
Texas Bank & Trust Company	18
Texas Medical Association	
Automobile Leasing Program	46
Memorial Library Fund	101
Statement of Ownership, Management and Circulation	38
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchings, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travic Clinic Association	45
Warner-Chilcott Laboratories	20,120-121
Wichita Falls Clinic	18
Physicians' Directory	103-112
Classified Advertising	117-119

Publication of an advertisement in *Texas Medicine* is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

Think you know all about asthma?

Then you should know all about TEDRAL.
It provides—

- □ rapid symptomatic relief, as well as prophylaxis
- □ β-ADRENERGIC ACTION THAT RELAXES BRONCHIAL SMOOTH MUSCLE
- □ α-ADRENERGIC ACTION THAT REDUCES BRONCHIAL EDEMA AND SECRETIONS
- □ synergistic action of ephedrine and theophylline for effective and prolonged bronchodilation
- □ dosage forms to meet individual patient needs

For asthma management...

Tedral® / Tedral® SA / Tedral® Elixir

Each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer), 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer); and 25 mg phenobarbital in the immediate release layer

SUSTAINED ACTION

Each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine HCl, and 2 mg phenobarbital; the alcohol content is 15%.

WARNER/CHILCOTT
Division, Warner-Lambert Company
Morris Plains, New Jersey 07950

T-GP-74-B/W

TEDRAL®

TEDRAL® SA Sustained Action

TEDRAL® Elixir

CAUTION: Federal law prohibits dispensing Tedral SA without prescription.

Description. Tedral: each tablet contains 130 mg theophylline, 24 mg ephedrine hydrochloride, and 8 mg phenobarbital.

Tedral SA: each tablet contains 180 mg anhydrous theophylline (90 mg in the immediate release layer and 90 mg in the sustained release layer); 48 mg ephedrine hydrochloride (16 mg in the immediate release layer and 32 mg in the sustained release layer); 25 mg phenobarbital in the immediate release layer.

Tedral Elixir: each 5 ml teaspoonful contains 32.5 mg theophylline, 6 mg ephedrine hydrochloride, and 2 mg phenobarbital; the alcohol content is 15%.

Indications. Tedral, Tedral SA, and Tedral Elixir are indicated for the symptomatic relief of bronchial asthma, asthmatic bronchitis, and other bronchospastic disorders. They may also be used prophylactically to abort or minimize asthmatic attacks and are of value in managing occasional, seasonal or perennial asthma.

Tedral SA (Sustained Action) offers the convenience of b.i.d. dosage.

Tedral Elixir is convenient for persons who may have difficulty in swallowing tablets.

These Tedral formulations are adjuncts in the total management of the asthmatic patient. Acute or severe asthmatic attacks may necessitate supplemental therapy with other drugs by inhalation or other parenteral routes.

Contraindications. Sensitivity to any of the ingredients; porphyria.

Warnings. Drowsiness may occur. PHENOBARBITAL MAY BE HABIT-FORMING.

Precautions. Use with caution in the presence of cardiovascular disease, severe hypertension, hyperthyroidism, prostatic hypertrophy, or glaucoma.

Adverse Reactions. Mild epigastric distress, palpitation, tremulousness, insomnia, difficulty of micturition, and CNS stimulation have been reported.

Average Dosage. *Prophylactic or Therapeutic.*

Tedral: *Adults*—One or two tablets every 4 hours. *Children*—(Over 60 lb) one-half the adult dose.

Tedral SA: *Adults*—One tablet on arising and one tablet 12 hours later. Tablets should not be chewed. *Children*—Not established for children under 12.

Tedral Elixir: Note: One teaspoonful is equivalent to *one-quarter* Tedral tablet. *Children*—One teaspoonful per 30 lb body weight, every 4-6 hours, unless prescribed otherwise by physician. Should be given to children under 2 years of age only with extreme caution. *Adults*—One to two tablespoonfuls every four hours.

Supplied. Tedral: White, uncoated scored tablets in bottles of 24 (N 0047-0230-24), 100 (N 0047-0230-51) and 1000 (N 0047-0230-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0230-11).

Tedral SA: Double-layered, uncoated, coral/mottled white tablets in bottles of 100 (N 0047-0231-51) and 1000 (N 0047-0231-60). Also in Unit Dose—package of 10 x 10 strips (N 0047-0231-11).

Tedral Elixir: Dark red and cherry-flavored in 474 ml (16 fl oz) bottles (N 0047-0242-16).

STORE BETWEEN 59° and 86°F (15° and 30°C).

Full information is available on request.

PARK NORTH GENERAL HOSPITAL

4330 Vance Jackson
San Antonio, Texas 78230
512/341/5131

A private 100-bed patient-oriented hospital offering general medical/surgical as well as comprehensive mental health services. Serving San Antonio and other Texas communities with dedicated professionalism.

A Blue Cross/Medicare/Medicaid approved hospital

For more information contact:
Manuel L. English, Ph.D.
Administrator

Starlite Village Hospital

Center Point, Texas

Ph.: 634-2212
634-2213

- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

R. H. McBride
Administrator

CHAMPUS APPROVED
JCAH: ACCREDITED

DOCTOR:

is your Medical Assistant keeping in step with you?

As medical practice becomes more complicated and more highly specialized, you need more highly trained medical assistants in your office.

Membership in the AMERICAN ASSOCIATION OF MEDICAL ASSISTANTS will help your assistants keep up-to-date and informed of new ideas and techniques. AAMA s continuing education program offers workshops and seminars that will enhance the professionalism of your office employees.

As the first professional organization for medical assistants (founded 1956), AAMA pioneered in developing the only certification program in this field. A medical assistant who successfully completes the basic examination is identified as a Certified Medical Assistant (CMA). Specialty categories include administrative (CMA-A), clinical (CMA-C), and pediatric (CMA-Ped). More than 7,500 certificates have been earned since the first examination was given in 1963.

The AAMA pioneered in the development of curriculum standards for medical assisting programs. The American Medical Association, in collaboration with AAMA, is recognized as an official accrediting agency for such programs by the U.S. Office of Education.

On five different occasions the AMA House of Delegates has passed resolutions commending the objectives of AAMA, endorsing its functions, and urging every physician to encourage medical assistants to join the association in order to benefit from its educational programs.

To help your medical assistants do a better job of helping *you*, urge them to join AAMA—the professional association dedicated to their continuing education. Fill in the attached coupon and mail it today. Your practice deserves the best.

I wish to inquire about membership for my medical assistant in the American Association of Medical Assistants, Inc. Please send more information to:

Name_____

Business Address _____ Phone _____

City _____ State _____ Zip Code _____

Member of county medical society? Yes _____ No _____

County _____

Names of assistants	Addresses
_____	_____
_____	_____
_____	_____

Clip and mail to: American Association of Medical Assistants, Inc., One East Wacker Drive, Chicago, Illinois 60601.

Editorials

MOTOR VEHICLE ACCIDENTS IN TEXAS: TOP CAUSE OF DEATH IN CHILDREN

Motor vehicle accidents kill more children than all diseases together, if we exclude children under one year of age. The most common contributing factors are: excessive speed, intoxicated (alcohol or drugs) drivers and improper use of, or failure to use, seat restraints.

In 1973, accidents in Texas accounted for three-fourths of all fatalities of children aged 1 to 19 years. All diseases, including homicide and suicide, and all deaths classified as "other external causes,"[1] were responsible for only one-fourth of the fatalities in the same age group. Automobile-related accidents accounted for more than half of all accidental deaths, with the majority involving teenagers.

In 1966, a survey by the National Committee on Accident Prevention[2] indicated that doctors did not receive enough information on accidents and accident prevention, nor were they interested. This is astonishing when we consider the tremendous impact of accidents in our society. According to the 1975 edition of *Accident Facts*,[3] the cost of accidents in 1974 in the US was more than $43.3 billion. This includes wage loss, medical and administrative costs, and property damage.

Accidental deaths are preventable—just like diphtheria and tetanus—but it takes awareness, organization and the systematic utilization of present technology. Poisoning prevention is a good example of a successfully operating accident-control program. While the incidence of poisoning episodes is still increasing, the mortality has decreased since poison-control centers, safety packages, and adult education were instituted.[4]

A coordinated scientific approach is essential to the accurate evaluation of the variables involved in motor vehicle accidents to discerning the best methods for their prevention. Sociologists, health educators, anthropologists, safety engineers, psychologists, political scientists, marketing experts, health providers, and government officials all have a tremendous contribution to make. If public understanding of and participation in preventive health programs are to be effective, the pooling of these areas of human knowledge is fundamental.

The problem of automobile accidents has been recognized by other countries, and different solutions have been chosen.[5-7] Australia legislated compulsory use of seat belts, and since January 1972, has effectively lowered the number of deaths by 17%, and the number of occupant injuries by 12%.[5] In Sweden, laws were first introduced in 1934 enabling traffic safety officers to carry out blood alcohol determinations on suspected drunk drivers.[6]

The Accident Prevention Committee of the Tennessee Chapter of the American Academy of Pediatrics, endorsed by the Tennessee Medical Association, has introduced a bill[8] which will require children to wear approved child-restraint systems while riding as passengers in motor vehicles.

In Texas, the problem has been recognized by public authorities, and remedial plans are being evaluated. Present legislation needs to be adjusted so that habitual drunks are removed from the road. Education programs need to effectively emphasize safe driving habits and the magnitude of the problem of motor vehicle accidents.

The role of physicians in the prevention of accidents is of vital importance. Patients and parents must have factual information about motor vehicle accidents and the incidence of advantage of utilizing safety belts and infant seats. Studies have shown the impressive effectiveness of physicians' counseling young mothers to use safe

restraint devices for their infants.[9] The pamphlet, "Don't Risk Your Child's Life,"[10] provides good basic information on child restraints, and describes how to select them.

At the community level, physicians should encourage the development of behaviorally oriented education programs, endorse pertinent legislation proposals, and disseminate relevant information on motor vehicle accidents.

The need for an organized effort is obvious. The Governor's Office of Traffic Safety has encouraged and may sponsor a workshop designed to promote the interchange of information and make available relevant expertise for individuals or organizations willing to share their ideas and experience. For more information, interested individuals are urged to contact the author, J. R. Toledo, MD, c/o Departmental Chairman, Psychology Department, North Texas State University, Denton, TX 76203.

Motor vehicle accidents are the number one cause of death of children in Texas. This problem is of basic importance and long overdue for focus of attention by health providers, other professionals, governmental leaders, and the community at large.

J. R. Toledo, MD, Corpus Christi, Chairman, Accident Prevention Committee, Texas Pediatric Society and Texas Chapter, American Academy of Pediatrics.

References

1. Texas Department of Health Resources, Austin and Dallas; and Texas Department of Public Safety, Motor Vehicle Traffic Accidents Report, 1974.

2. Committee on Accident Prevention: Accidents in children. American Academy of Pediatrics, 1968.

3. Accident facts. National Safety Council, 1975.

4. Waldman JM, Mofenson HC, Greensher J: Evaluating the function of a poison control center. Suggestions on how to protect children from toxic accidents. Clin Pediatr 15:75-79, 1976.

5. Hauser DJ: Seat belts: is freedom of choice worth 800 deaths a year? Can Med Assoc J 110:1418-1422, 1974.

6. Poynter AG, Anderson M: The drinking driver: a blueprint for some further action. NZ Med J 83:47-50, 1976.

7. Simpson JS: Trauma: the leading childhood killer in Canada and elsewhere. Clin Pediatr 15:313-316, 1976.

8. Personal communication from Robert S. Sanders, MD, Chairman, Accident Prevention Committee, Tennessee Chapter, American Academy of Pediatrics.

9. Kanthor HA: Car safety for infants: effectiveness of prenatal counseling. Pediatrics 58:320-322, 1976.

10. Don't risk your child's life! Physicians for Automotive Safety, 50 Union Ave, Irvington, NJ 07111.

HUMAN RESOURCES BOARD INCREASES MEDICAID SERVICES REIMBURSEMENT

One of the top priorities of the Texas Medical Association is to represent the physician membership before legislative bodies and governmental agencies.

Tangible results of these efforts were evident in late August when the Texas Board of Human Resources (formerly the State Board of Welfare) voted to increase reimbursement under the Medicaid program from 95% to 100% of the allowable payment under Medicare. Payment of 100% of the Medicare allowable is the maximum permitted by law.

The action by the Texas Board of Human Resources culminates long and sustained effort by TMA, the TMA Council on Tax-Financed Health Care Programs, and staff. Credit should be given to board member Jamie N. Clements, Temple, who presented the recommendation with the support of Raymond Vowell, the former Texas Department of Human Resources commissioner.

While the actual increase in dollars may not be substantial, the action should be beneficial psychologically, particularly to those physicians who have substantial Medicaid patient loads. If the increased level of reimbursement does stimulate additional physician participation, it could reduce overall program costs by having services delivered in the physician's office, rather than in the hospital emergency room.

The increased level of reimbursement may reduce the number of complaints and inquiries from physicians who have received different amounts of reimbursement for rendering identical services to patients covered by the Medicaid and Medicare programs.

Although the Medicare and Medicaid programs now pay the same, major challenges still facing the Association are to increase the absolute level of reimbursement to more adequately reflect actual costs and to achieve greater parity in the rates of reimbursement provided to rural and urban physicians.

The Association and the Council on Tax-Financed Health Care Programs will continue to work with the legislative bodies and governmental agencies representing the physicians of Texas.

Dec77 TexasMedicine

Noninvasive cardiovascular studies

Low-dose heparin in pelvic surgery

Corrosive acid burns of the stomach

Tuberculosis is not wiped out yet

Surgical treatment of the ischemic limb

THE LIBRARY
ACQUISITIONS DIV.
UNIV. OF CALIFORNIA, S. F.
SAN FRANCISCO CA 94143

30
C/S
15

Library
U.C. San Francisco
OCT 1977

Torbett-Hutchings-Smith Memorial Hospital
and Torbett-Hutchings-Smith Clinic

322 Coleman Street — Marlin, Texas 76661 — Telephone: 883-3561

Post Office Box 60

GENERAL SURGERY
Howard O. Smith, M.D., F.A.C.S.*
D. R. Swetland, M.D., F.A.C.S.
Howard L. Smith, M.D., F.A.C.S.

INTERNAL MEDICINE
W. F. McKinley, Jr., M.D.
James S. Bussell, M.D.
C. G. Brown, M.D.

EYE, EAR, NOSE AND THROAT
S. W. Hughes, M.D.

TRAUMATIC AND ORTHOPEDIC SURGERY
D. R. Swetland, M.D., F.A.C.S.

ALLERGY
S. W. Hughes, M.D.

CARDIOLOGY
W. F. McKinley, Jr., M.D.

OBSTETRICS AND PEDIATRICS
William Pickvance, M.D.

RADIOLOGY
J. M. Brown, M.D., F.A.C.R.

PATHOLOGY
Ronald E. Henderson, Jr., M.D.
David M. McTaggart, M.D.
S. M. Bunn, Jr., M.D.

UROLOGY
Howard O. Smith, M.D., F.A.C.S.*
Howard L. Smith, M.D., F.A.C.S.

NEUROPSYCHIATRY
S. B. Morrison, M.D.

NEUROSURGERY
Harry W. Slade, M.D., F.A.C.S.

DERMATOLOGY
Maurice C. Barnes, M.D., D.A.B.D.

Administrator:
J. D. Norris, Jr.

Associate Administrator:
Larry Parsons

Director-Coordinator, Nursing Service:
Vera Bee, R.N.

Director of Patient Care:
Ruby Lowrance, R.N.

Howard O. Smith, M.D., FACS, Chairman of the Board of Trustees, of Torbett, Hutchings, Smith Memorial Hospital and the Torbett Clinic which opened January, 1963. The original hospital was founded by Dr. J. W. Torbett, Sr., in 1898.

*Expired May 17th, 1977.

THE DALLAS MEDICAL & SURGICAL CLINIC AND HOSPITAL

4105 Live Oak Street — DALLAS, TEXAS 75211 — Telephone 823-4151

INTERNAL MEDICINE
John B. Allen, M.D., D.A.B.I.M.
Morris E. Magers, M.D., D.A.B.I.M.
Channing Woods, M.D.
Richard C. Stone, M.D., Gastroenterology
Landon W. Stewart, M.D., D.A.B.I.M.
Cloyce L. Stetson, Jr., M.D., D.A.B.I.M.
David S. Sowell, III, M.D., D.A.B.I.M., Cardiology
Don E. Cheatum, M.D., D.A.B.I.M., and D.A.B. Rhu, F.A.C.P., Rheumatology
W. Mark Armstrong, M.D., D.A.B.I.M.
Sam W. Waters, M.D.
George E. Thomas, M.D., D.A.B.I.M.
Steven P. Bowers, M.D., D.A.B.I.M.
Carlos M. Kier, M.D., D.A.B.I.M., Rheumatology

ORTHOPEDIC SURGERY
George S. Phalen, M.D., D.A.B.O.S., F.A.C.S.

OBSTETRICS AND GYNECOLOGY
John B. Miller, III, M.D., D.A.B.O.G.
Vernie D. Bodden, M.D.

PEDIATRICS
Halcuit Moore, M.D., D.A.B.P., F.A.A.P.
P. E. Luecke, Jr., M.D., D.A.B.P., F.A.A.P.
Larry Gray, M.D., D.A.B.P., F.A.A.P.

GENERAL SURGERY
George P. Fosmire, M.D., D.A.B.S., F.A.C.S.
Miller S. Bell, M.D., D.A.B.S., F.A.C.S.

UROLOGY
Harry M. Spence, M.D., D.A.B.U., F.A.C.S.
William H. Hoffman, M.D., D.A.B.U., F.A.C.S.
Richard B. Dulany, M.D., D.A.B.U., F.A.C.S.

RADIOLOGY
Raymond W. Burford, M.D., D.A.B.R.
Joe B. Caldwell, M.D., D.A.B.R.
James B. Evans, M.D., D.A.B.R.

DERMATOLOGY
William N. New, M.D., F.A.A.D., F.A.C.P.

OTOLARYNGOLOGY AND OTOLOGIC SURGERY
D. W. Shuster, M.D., D.A.B.O.

OPHTHALMOLOGY
R. M. Burnside, M.D., D.A.B.O.
James M. Copps, M.D., D.A.B.O.

DENTISTRY AND DENTAL SURGERY
J. Boyd Hollabaugh, D.D.S.
William F. Walton, D.D.S.
Larry L. Cowsert, D.D.S.

ADMINISTRATION
C. H. Rosamond, Administrator
Jack Green, Associate Administrator

DIRECTOR OF NURSING SERVICE
Miss Billye J. Norris, R.N.

INACTIVE STATUS
George M. Underwood, M.D., D.A.B.I.M., F.A.C.P., Gastroenterology
William H. Potts, M.D., F.A.C.P., Internal Medicine
J. Wilbur Bourland, Jr., M.D., Obstetrics and Gynecology
Adam D. Green, M.D., Surgery
B. Celia Slaughter, M.D., D.A.B.P., F.A.A.P.
John B. Bourland, M.D., D.A.B.O.G.

Her next attack of cystitis* may require

The Bactrim™ 3-system counterattack

*Due to susceptible organisms

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Bactrim™ DS Double Strength Tablets

ROCHE

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Please see reverse side for summary of product information.

ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days

- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice
- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris, Proteus morganii.* **It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination.** *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register,* 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older:

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

Pneumocystis carinii pneumonitis: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: *Double Strength (DS) tablets,* each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. *Tablets,* each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. *Oral suspension,* containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Texas Medicine
VOL 73 DECEMBER 1977

Devoted to the interest of the medical profession and public health in Texas

BOARD OF PUBLICATION
Don G. Harrel, MD, Dallas
Chairman
Sam N. Key, MD, Austin
Vice-Chairman
Merle W. Delmer, MD, San Antonio
Secretary
Walter A. Brooks, MD, Quanah
R. Harvey Bell, MD, Palestine
C. W. Yates, MD, Rosenberg
Paul R. Meyer, MD, Port Arthur

TMA OFFICERS
John M. Smith, Jr., MD, San Antonio
President
A. J. Gill, MD, Dallas
Vice-President
Mylie E. Durham, Jr., MD, Houston
President-Elect
James G. Morris, MD, Lubbock
Secretary
Ben R. Keller, Jr., MD, Arlington
Treasurer
C. Lincoln Williston, Austin
Executive Director

EDITORIAL STAFF
1905 N Lamar Blvd, Austin 78705
Telephone: 512-477-6704
Marilyn Baker, Executive Editor
Rae Vajgert, Assistant Executive Editor
Elise David, Assistant Editor
Donna Billie, Editorial Assistant
Patty Mullins, Secretary

ADVERTISING STAFF
1B01 N Lamar Blvd, Austin 78701
Jon R. Hornaday, Advertising Director
Anne Shelnutt, Advertising Manager

SCIENTIFIC PUBLICATION COMMITTEE
C. W. Daeschner, MD, Galveston
Chairman
Robert Askew, MD, Austin
Vice-Chairman
Ernest C. Butler, MD, Austin
Jesse D. Cone, MD, Odessa
Richard D. Cunningham, MD, Temple
George A. Gates, MD, San Antonio
Tracy R. Gordy, MD, Austin
David P. Green, MD, San Antonio
R. Maurice Hood, MD, Austin
Paxton H. Howard, Jr., MD, Temple
Daniel E. Jenkins, Jr., MD, Houston
Joseph Lancaster, MD, Austin
Francis E. McIntyre, MD, Austin
Paul C. Peters, MD, Dallas
H. Irving Schweppe, Jr., MD, Houston
Karen W. Teel, MD, Austin
Theodore P. Votteler, MD, Dallas

PRINTING OFFICES
c/o Stafford-Lowdon Company
1114 West Daggett, Fort Worth 76104

SUBSCRIPTIONS
1801 N Lamar Blvd, Austin 78701
c/o Business Office
$4 per year for members; $8 for non-members; $14 for foreign; $6 for libraries, hospitals, and universities; $4 for medical students. Single copy: $1.25.

CHANGE OF ADDRESS
1B01 N Lamar Blvd, Austin 7B701
c/o Membership Office

Copyright ©1977 by the Texas Medical Association. Owned and issued monthly by the Association.

Second Class Postage paid at Austin, Texas, and additional mailing office, under act of March 3, 1B79. Publication number 796660.

Postmaster: Please direct correspondence to Marilyn Baker, Executive Editor, 1905 N Lamar Blvd, Austin, TX 78705.

Contents

Scientific Articles

35 Noninvasive cardiovascular studies — Travis Winsor, MD; David Winsor, MD; Robert Smith

45 Use of low-dose heparin in pelvic surgery — Richard P. Marrs, MD; Robert E. Girtanner, MD

56 Surgical treatment of the ischemic limb — LeRoy J. Kleinsasser, MD

60 Primary aldosteronism — Mark R. Swanson, MD; Jay C. Fish, MD

64 Corrosive acid burns of the stomach — Juan F. Jimenez-Chapa, MD; Roberto O. Chiprut, MD; William J, Hardin, MD; Thomas R. Liebermann, MD

68 Lost lid signs in topical neuro-ophthalmic diagnosis — Robert A. Laibovitz, MD; Robert Cain, MD

Feature

74 A&M — the state's newest medical school

Editorials

108 TB still has victims in Texas — Robert B. Skinner, MD

News

7 Winter conference focuses on legislative issues
11 Speakers selected for 1978 Annual Session
12 Carter signs new Medicaid Medicare law
12 Rocky Mountain spotted fever remains in Texas
14 Medicare increases inpatient hospital deductible
16 Califano seeks change in Texas PSRO designation
16 TMA sponsors medical malpractice seminar in Houston
17 TMA House of Delegates meets in Austin in November
19 Board of Medical Examiners issues 696 licenses
19 Continuing education directory will be mailed in December
19 Anson Jones award competition announced

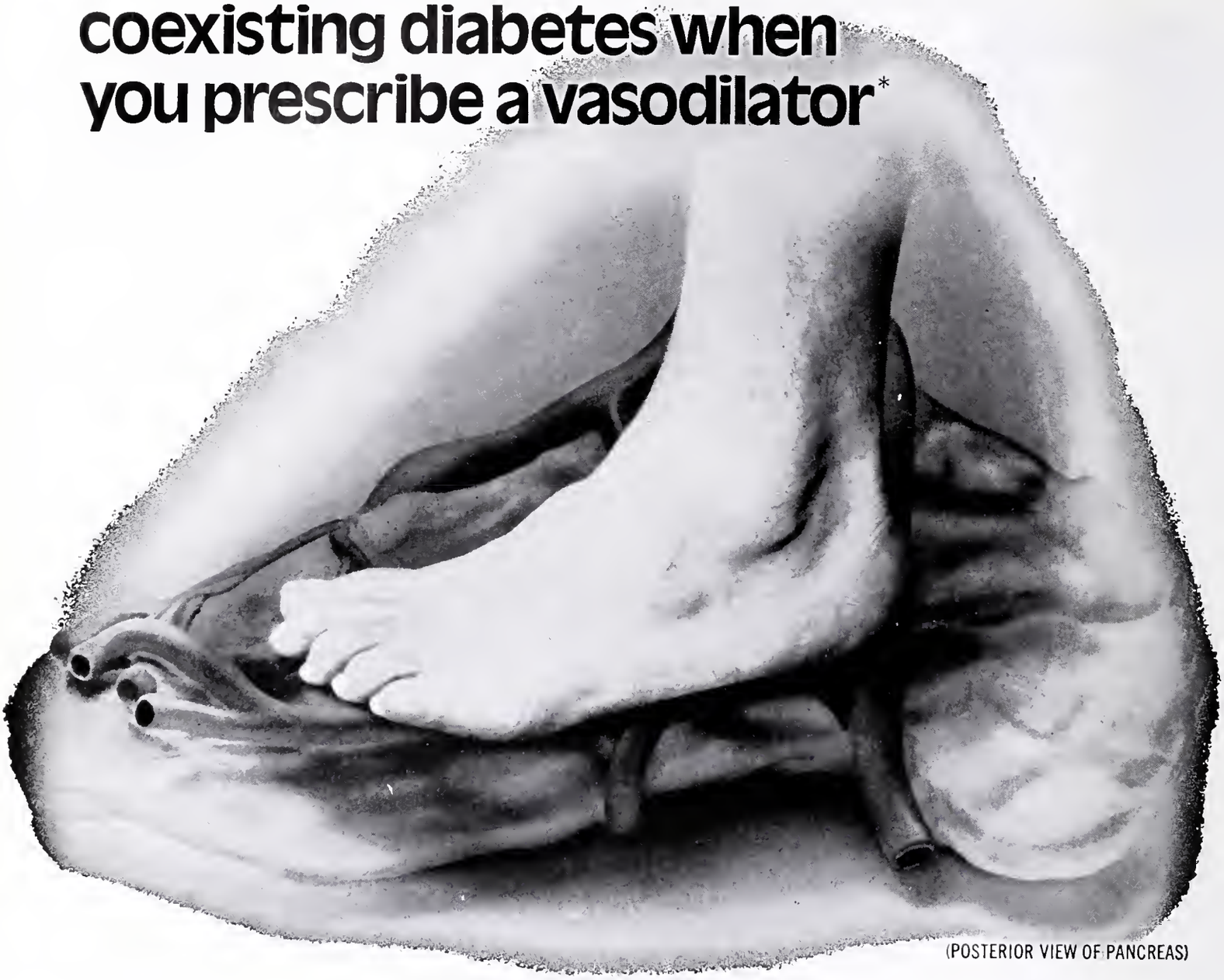
Departments

21 Capital Comments
24 Meetings
30 Continuing Education
70 Information for Authors
77 Medicine and the Law
81 Medical Newsmakers
83 Medicine in Literature
86 Deaths
108 Letters

On The Cover

Normal flow velocity in the external carotid artery is shown; it is one of the noninvasive measurements of cardiovascular function discussed in the article beginning on page 35. It also makes an interesting pattern for exercising a freewheeling imagination.

consider the effect on coexisting diabetes when you prescribe a vasodilator*



(POSTERIOR VIEW OF PANCREAS)

no interference in the management of the diabetic patient has been reported with

VASODILAN®
(ISOXSUPRINE HCl)

the compatible vasodilator TABLETS, 20 mg.

*__Indications:__ Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily.

Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

Mead Johnson LABORATORIES

© 1977, MEAD JOHNSON & COMPANY, EVANSVILLE, INDIANA 47721 U.S.A. MJLS-4117R1

Practice Productivity Inc.

one day WORKSHOP

BUSINESS ESSENTIALS FOR A MEDICAL OFFICE

FOR YOUR MEDICAL OFFICE ASSISTANTS

8:45 a.m. to 5:00 p.m.

January 17, 1978	Odessa	Best Western-Villa Del Sol
January 18, 1978	Dallas	Fairmont Hotel
January 19, 1978	Austin	Driskill Inn
January 20, 1978	San Antonio	La Mansion Hotel
January 24, 1978	Beaumont	Holiday Inn
January 25, 1978	Corpus Christi	Hilton Inn
January 26, 1978	Houston	Galleria Plaza Hotel

OFFICE MANAGERS
RECEPTIONISTS
MEDICAL SECRETARIES
BOOKKEEPERS
INSURANCE CLERKS
NURSES

This program has been approved for Continuing Education Units by AAMA

TOPICS: Telephone Management, Appointment Scheduling, Medical Records, Personnel, Billing Systems and Collection, Insurance Claim Processing.

Practice Productivity Inc. is a national management consulting firm located in Atlanta whose only clients are physicians engaged in the private practice of medicine. Practice Productivity offers educational and motivational workshops in sound business concepts to physicians, medical office managers, and medical assistants. Practice Productivity also provides nation-wide individual consulting to physicians at their private practice.

For Further information, contact:
Duane M. Johnson, PhD, Executive Vice-President, Practice Productivity, Inc.

Registration Form

Name	Position	City Will Attend	Date Will Attend
1.			
2.			
3.			

Name of Practice: _____

Specialty: _____ Telephone: (_____) _____

Address: _____

City: _____ State: _____ Zip: _____

Full tuition fee of $ _____ is enclosed at $75 per registrant. Tuition includes course materials and luncheon and MUST ACCOMPANY THIS FORM. (There is a $10 handling fee deducted on all refunds for cancellations received at least one week in advance of course; no refund thereafter.)

Practice Productivity Inc.

2000 Clearview Avenue, Atlanta, Georgia 30340, Telephone 404/455-7344 or Toll Free 800/241-6228

News in brief

TMA winter conference

The 1978 TMA Conference on Legislation and Medical Service will be the title for the winter conference Jan 21, 1978 in Austin. The conference will provide information on hospital and medical staff relationships, National Health Insurance, issues facing the 1978 Congress, hospital cost containment, big government, and physician political involvement . . . 7

Health planning guidelines

Both Texas Gov Dolph Briscoe and Lt Gov Bill Hobby have written to President Jimmy Carter and HEW Sec Joseph Califano criticizing the proposed National Guidelines for Health Planning. The guidelines were published in September by HEW to establish national numerical standards for certain areas of health services. The proposed guidelines seek to reduce the number of hospital beds and limit the number of facilities providing certain kinds of acute care . . .7

Medicaid Medicare legislation

A new law including stiff penalties for providers who are found guilty of fraud in the Medicare and Medicaid programs has been signed by President Carter. The new law levies felony penalties to a maximum $25,000 fine and five years in prison replacing the misdemeanor penalties of up to a $10,000 fine and one year in prison. The bill passed overwhelmingly by Congress is aimed at providers and retains misdemeanor penalties for recipients convicted of defrauding the programs . . . 12

PSRO

The designation of Professional Standards Review Organization (PSRO) areas in Texas remained unsettled in November. HEW Secretary Joseph Califano has decided that the earlier approval of a statewide PSRO in Texas was "legally unsupportable." The Texas Medical Association has informed Califano that there is no legal barrier to his administratively designating the state as a single PSRO area . . . 16

News in detail

Winter conference focuses on legislative issues

The 1978 Conference on Legislation and Medical Service will be the title for the Texas Medical Association's winter conference Jan 21, 1978 in Austin.

The conference will provide information on hospital and medical staff relationships, National Health Insurance, issues facing the 1978 Congress, hospital cost containment, big government, and physician political involvement.

The conference will be at the Joe C.Thompson Center in Austin. TMA committees, boards, and councils will also be meeting Jan 20, 21, and 22.

Speakers and their topics include Clinton S. McGill, Jr, MD, Portland, Hospital Medical Staff Relationships; James S. Todd, MD, Ridgewood, NJ, National Health Insurance; Rep Bill Archer, Houston, Issues Facing the 1978 Congress; Alexander McMahon, president American Hospital Association, Hospital Cost Containment; James N. Sites, National Association of Manufacturers, Big Government—Can We Really Afford It?; and Archie T. Johnson, MD, Why Physicians Should Become Involved in Politics.

The conference will also include two panel sessions. Joseph T. Ainsworth, MD, Houston, will be the moderator for one panel session about National Health Insurance. Panel participants and their topics include John Cavras, Dallas, Hospital Viewpoints; Louie Welch, Houston, Business and Industry Viewpoints; Truman S. Blocker, Jr, MD, Houston, Medical Education Viewpoints; Joseph M. Merrill, MD, Study of the British System; and Ron Livingstone, MD, Private Practice under NHI Programs in Great Britain and Canada.

Briscoe and Hobby comment on proposed national health planning guidelines

Both Texas Gov Dolph Briscoe and Lt Gov Bill Hobby have written to President Jimmy Carter and HEW Sec Joseph Califano criticizing the proposed National Guidelines for Health Planning.

The guidelines were published in September by HEW to set up national numerical standards for some specialized health services.

These formulae give maximum and minimum supply for nine types of services. The nine services are general hospital, obstetrics, pediatric inpatient services, neonatal care, open-heart surgery, cardiac catherization, radiation therapy, end-stage renal disease treatment, and computed tomographic scanning. For example, for general acute care hospitals, a standard of 4 beds per 1000 population and 80% occupancy is proposed.

These proposed regulations could close some Texas hospitals or require them to cease offering certain services, such as obstetrics.

The proposed guidelines seek to reduce the number of hospital beds and limit the number of facilities providing certain kinds of acute care.

The guidelines represent the first of a series of guidelines intended to extend over more aspects of health care. They are addressed to Health Systems Agencies nationwide. Total compliance with the guidelines will be required of each HSA within five years of their implementation. Each state health plan and state medical facility plan must comply with the guidelines.

In his letter to President Carter, Gov Briscoe said, "I take strong exception to the National Guidelines for Health Planning." Briscoe said the imposition of arbitrary, rigid formulas for determining the appropriate availability of health services and facilities for the citizens of Texas is highly offensive and will in the long run result in rationed health care.

"When fully implemented, these guidelines will further aggravate the problems that the citizens of rural Texas face in providing adequate health care facilities and in attracting and retaining physicians and other health care professions," Briscoe said.

Briscoe warned that the guidelines go too far in failing to articulate exceptions and in placing too much importance on the Washington Bureaucrats' as opposed to the citizens' planning efforts.

"Arbitrary formulas that in essence maintain that the health care needs of the citizens of

Wichita, Kan; San Francisco, Calif; Harlingen, Tex; New York, NY; and Anchorage, Alaska; are the same are foolish and unfounded in fact or logic," Briscoe said.

These guidelines perpetuate the failure of the federal government to recognize that the federal government itself has been responsible to a large degree for the tremendous increase in the cost of health care, he said.

In his letter to Sec Cailfano, Lt Gov Hobby said that the proposed federal limitations on expansion of medical care facilities "are unfair to the citizens of Texas.

"If the state of Texas is to continue to be a partner with the federal government in planning for the availability and delivery of health care to the citizens we both serve, then these proposed guidelines must be set aside," Hobby said.

"Consideration must be given to the special medical needs of the various communities. Arbitrary limitation such as these proposals will leave vast numbers of our citizens without proper and needed health care services," Hobby concluded.

The guidelines include specific recommendations for the types of services. For general hospitals, the guidelines state, "There should be less than four non-federal short-term hospital beds for 100 persons in a health service area . . ." with certain exceptions.

On the subject of occupancy rate for general hospitals, the guidelines state "There should be an average annual occupancy rate of at least 80% for all non-federal, general short-term hospitals in a health service area." Areas having seasonal population changes and areas having several small rural hospitals may have a lower annual occupancy rate.

Concerning pediatric inpatient services, the guidelines direct that pediatric units, wards or wings devoted to patients less than 15 years old, but not to include intensive care units for infants less than 29 days old, must maintain a minimum of 20 beds to ensure maximum efficiency and economy of operations. A smaller size may be justified if 10% or more of those served by the unit reside more than 30 minutes driving time away.

A minimum of 200 procedures annually must be performed in any institution where open heart surgery is performed, and no new open heart units may be opened unless each unit in the Health Systems Agency will continue to perform at least 350 open heart surgeries annually, according to the proposed guidelines.

The regulations dealing with Computed Tomgraphic Scanners state that each scanner must perform at least 2,500 procedures per year, and no new scanners should be approved unless those existing in a Health Systems Agency area are performing in excess of 4,000 procedures per year. All new units must be put into operation in conjunction with a data collection system which must record the presenting signs and symptoms of CT examiners, a demographic characteristic of recipients, rate of positive diagnoses of disease conditions by the CT, place of CT examination in sequence with other diagnostic procedures and sensitivity and specificity of CT examination performed in different parts of the body.

FDA is considering program to deal with amphetamine drug abuse

The Food and Drug Administration will hold a public hearing Dec 2, in Rockville, MD, on actions planned by the agency to curtail the abuse of amphetamine drugs.

Amphetamines are a class of prescription drugs primarily used for weight reduction and as pep pills. Less common uses are for the treatment of narcolepsy and for minimal brain dysfunction in children.

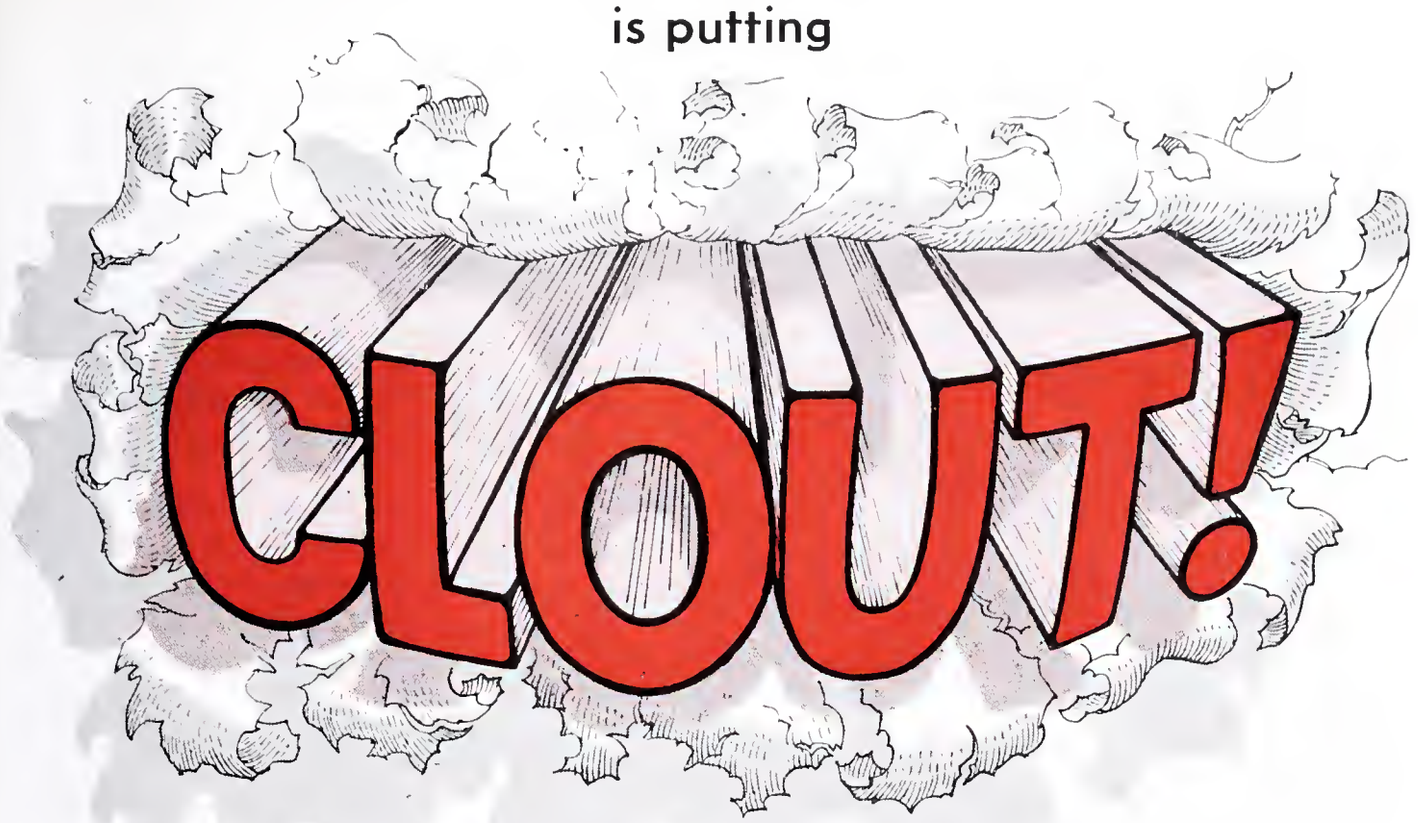
There is increasing evidence that amphetamines remain subject to considerable abuse, even though stringent federal controls have reduced the amount that can be legally manufactured by up to 80% over the peak production year of 1965, according to the Dept of HEW.

The FDA is considering a three-pronged approach to deal with the continuing abuse problem:

1. Revoke approval of the drugs for use in obesity control. About 88% of legal medical use of these drugs is for control of obesity, even

The Texas Medical Association Insurance Program

is putting



in

Long Term Benefits for Partial Disability

We believe you will agree that "CLOUT" is appropriate to describe this new option under the Long Term Disability Income plan when you learn that total disability beyond the waiting period will not be required to qualify for partial disability benefits.

The new option bases qualification for claim payments on the extent of partial disability and the resulting loss of income over a period of six consecutive months, whether or not any total disability is involved.

Call it clout, equity or whatever. To us it makes sense not to require a period of total disability to qualify.

For complete details and enrollment forms

call or write

Texas Medical Association Insurance Program

administered by the

TEXAS MEDICAL ASSOCIATION INSURANCE TRUST

1901 N. LAMAR BLVD., AUSTIN TX 78705

Dial Toll Free 1-800-252-9318

Prudential
Group Insurance

though amphetamines are approved only for short-term obesity control.

2. Retain the use of amphetamines only for treatment of narcolepsy and minimal brain dysfunction.

3. Require a special patient brochure for amphetamines to explain their limited usefulness and warn about their serious potential for abuse and for physical harm from overuse. The brochure would be distributed with every prescription.

If FDA revokes approval for obesity control the Drug Enforcement Administration (DEA) in the Department of Justice could lower still further the amount of the drugs that can be legally manufactured. Under the Controlled Substances Act, DEA sets production limits for all drugs that, like the amphetamines, are medically useful but have serious potential for abuse. Under this law amphetamines are rated by DEA, along with morphine and other opium products, in the most restrictive category for marketed drugs.

FDA announced last year it would consider taking action against amphetamines if studies documented a continuing and serious abuse problem. Since then, FDA has received considerable data from DEA and the National Institute on Drug Abuse on amphetamine abuse.

New rabies vaccine not being manufactured

The Human Diploid Cell Vaccine (HDCV), a new rabies vaccine, will not be produced by a manufacturer until the vaccine has achieved full Bureau of Biologics, FDA approval, according to the Texas Department of Health.

The health department's Bureau of Communicable Disease Services staff has received many inquiries about the availability of the new vaccine.

According to the health department, no HDCV will be on the market for at least one year. However experimental use of HDCV is permissible in some post-exposure patients. Due to lack of supply, some requests have not been filled.

For now, the only treatment for exposure to rabies is a combination of Human Rabies Immune Globulin (HRIG) and Duck Embryo Vaccine (DEV), followed by a test for antirabies titer. Both HRIG and DEV are available through Texas Department of Health Regional Medical Directors.

Indications are that the new vaccine will offer protection equivalent to or better than that which has been demonstrated with DEV. When the new HDCV receives approval by the FDA, the dosage regimen will probably involve fewer doses and also be associated with relatively minor local reactions at the injection sites.

Prior to its approval by the FDA, the only instances in which HDCV will be released are when a full course of HRIG and DEV fails to produce a protective antibody titer, or when life-threatening generalized hypersensitivity reactions make it impossible to continue the use of DEV.

When physicians suspect that conditions warrant the use of HDCV, direct inquiries to the Bureau of Communicable Disease Services, Texas Department of Health, phone 512-458-7207.

Board of Medical Examiners will submit request to Texas Attorney General

The State Board of Medical Examiners will meet in Austin Dec 3-8.

The Board of Medical Examiners plans to submit an opinion request to the Texas Attorney General asking for an interpretation of what will be required by physicians to comply with HB 1309 which became effective June 15, 1977.

The clinical laboratory billing law requires any physician to furnish to the patient or third party payor the name and address of any laboratory and the net amount or amounts paid or to be paid to the laboratory for individual tests, combination of tests, or test series.

Meeting in September to consider HB 1309, the board voted to ask certain questions about the bill of the Texas Attorney General. A committee of the State Board of Medical Examiners has been working to formulate possible regulation for HB 1309.

Uninsured physicians must report claims to Board of Medical Examiners

The Medical Liability and Insurance Improvement Act, which became effective Aug 29, 1977, requires any physician not covered by professional liability insurance to personally report directly to the Texas State Board of Medical Examiners any suits or claims alleging malpractice filed or made against him.

Any physician not covered by professional liability insurance who has had a suit filed or claim made, contact John H. Sortore, Investigator in Charge, 211 E 7th Street, Suite 900, Austin, TX, 78701, phone 512-474-6335 for the report form.

500 corporations get HMO pitch from Califano

Health, Education, and Welfare Secretary Joseph Califano is inviting 500 large corporation representatives to Washington D.C. Feb 7 to make a pitch for them to establish HMOs for their employees to replace fee-for-service health insurance plans.

He made the announcement at a ceremony in New York City certifying the 3.25 million member Kaiser-Permanente prepaid health plan as an HMO. As a result, Kaiser becomes eligible for certain federal loans and loan guarantees.

In the drive to promote establishment of the prepaid plans, Califano said HEW has cut qualification time for new HMOs by almost 40% by assigning extra staff and streamlining the paper work.

By the end of the year, HEW will publish for the first time guidelines to help state and local planning agencies "recognize the special needs of HMOs when these health plans request certificates of need," Califano said. He added that the guidelines "will be designed to encourage HMO development and expansion, which has often been thwarted by local health planning agencies applying rules of thumb designed for expansion in the fee-for-service sector. These guidelines are an essential step to allow the HMO movement to develop to its full potential."

Four years after Congress enacted the original HMO legislation, there were 43 federally-qualified organizations serving about 615,000 people. With the signing of Kaiser and its four major plans, there are now 47 HMOs serving more than 3.8 million people.

Texas Department of Health establishes Bureau of Long Term Care

The Texas Department of Health is implementing its new nursing home authority with the establishment of the Bureau of Long Term Care.

The health department received additional responsibility for nursing home facilities from SB 9 passed by the special session of the Texas Legislature in July 1977.

Raymond T. Moore, MD, deputy commissioner of health, will serve as acting chief of the bureau until a full time chief is named.

Howard C. Allen, director of the former Nursing and Convalescent Homes Division, is the executive assistant of the Bureau of Long Term Care.

To implement the department's responsibility, 435 personnel were transferred to the Department from the Texas Department of Human Resources, including personnel in the Medical Assistant Units stationed throughout Texas.

Speakers selected for 1978 Annual Session

Edward Teller, MD, father of the hydrogen bomb, and John Budd, MD, president of the American Medical Association, will address luncheon meetings during the 1978 Texas Medical Association Annual Session in San Antonio in May.

Dr Teller will address the Friday luncheon, and Dr Budd will address the Delegate's luncheon Thursday.

More than 54 guest speakers have been secured for the program. In conjunction with the meeting, 22 scientific sections, 30 related organizational programs, seven special programs, and committee and council meetings will be scheduled.

Carter signs new Medicaid Medicare law

A new law including stiff penalties for providers who are found guilty of fraud in the Medicare and Medicaid programs has been signed by President Carter.

The new law levies felony penalties to a maximum $25,000 fine and five years in prison replacing the misdemeanor penalties of up to a $10,000 fine and one year in prison.

The bill passed overwhelmingly by Congress is aimed at providers and retains misdemeanor penalties for recipients convicted of defrauding the programs. It was the first major health bill of the Administration to become law.

Providers found guilty of fraud and abuse will be treated as felons and punished by up to five years in jail and/or a fine up to $25,000. Previous law considered such violations as misdemeanors rather than felonies.

Illegal kickbacks among providers are defined and institutions are compelled to submit ownership data to the government. One of the main targets of the bill was so-called Medicaid mills and kickbacks uncovered in several large cities.

The disclosure requirements do not apply to individual physicians or to groups of physicians.

States must form anti-fraud units separate from their health departments in order to qualify for Medicaid funding.

States can supersede PSRO activities covering Medicaid if they demonstrate to the federal government that PSROs are making decisions that "have a detrimental effect" on state Medicaid spending.

The Health, Education & Welfare Department was given the authority to select regional or national intermediaries if it concludes that existing intermediaries within a state are doing a poor job.

Most Medicaid reimbursement would have to be made within 30 days by the states.

Rocky Mountain spotted fever remains in Texas

Rocky Mountain spotted fever remains a significant rickettsial disease in Texas despite the success of broad spectrum antibiotic treatment.

Texas had 29 human cases in 1976 and through Oct 1, 1977, 28 human cases have been reported with one death.

The limited number of terminal cases seems to be attributed to the early diagnosis and treatment, according to the Texas Department of Health. However, the health department says there is good indication that many cases are undiagnosed due to the presumed geographical limits of the disease prevalence in Texas.

The disease has been thought to occur primarily in the eastern section of Texas. In recent years a shift has occurred in those areas reporting rickettsial organisms in ticks and human cases.

The surveillance program has shown presence of rickettsiae in Brewster, Terry, El Paso, Crane, and Andrews Counties, and a recent human case was diagnosed in Lubbock County.

The sudden occurrence of general aching, chills, severe headache, and high fever with a history of tick exposure or bite should suggest rickettsial disease as a possible diagnosis regardless of geographic location of the patient.

Little improvement shown in cancer survival rate

Although some cancers have yielded to new treatments, the five-year survival rate for most cancer patients has not changed much in the past 25 years, says a report in the Oct 24 Medical News Section of the *Journal of the American Medical Association*.

When all cancer patients are considered together, the therapeutic gains against bladder and prostatic cancer are offset by the increased relative frequency of lung cancer. Thus 41% of all white and 32% of all black cancer patients survive five years—percentages changed little from 1950 when they were 39% and 27% respectively.

For most of the major cancers, says the study by the National Cancer Institute, black patients continue to have a substantially poorer outlook than their white counterparts. However, there was a marked improvement for black patients in the five-year survival rates

chewable!
chewable!
chewable!
chewable!
chewable!

announcing

ISORDIL® CHEWABLE TABLETS 10 mg
(ISOSORBIDE DINITRATE)

for those angina* patients for whom you prefer a chewable isosorbide dinitrate. This higher strength chewable tablet makes increased dosage practical, and the tablet is scored for a lower starting dose and titration of dosage.

***Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:
"Probably" effective: When taken by the chewable route, Isordil Chewable Tablets are indicated for the treatment of acute anginal attacks and for prophylaxis in situations likely to provoke such attacks.
Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.

Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.

Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

Consult direction circular before prescribing.

May we send you reprints, detailed information and/or professional samples?

IVES LABORATORIES INC. Ives®
685 Third Avenue
New York, New York 10017

DEDICATED TO IMPROVING THE QUALITY OF LIFE THROUGH MEDICINE®

from breast, bladder, prostate, and rectal cancer. The biggest improvements in survival rates for white patients came in bladder and prostatic cancer, although there was slight improvement in breast and rectal cancer.

For the six other leading cancers—uterine, cervical, colon, stomach, lung and pancreas, five-year survival rates improved no more than 5% during the last 25 years for both blacks and whites.

UT Southwestern receives burn contract

The University of Texas Southwestern Medical School has received a contract for one and one-half to two million dollars to provide emergency medical consultation and teaching programs as a Regional Burn Center for a large area of Texas.

Emergency Services Administration of the Department of Health, Education and Welfare has contracted with the school and five Texas Emergency Medical Services—Trinity Valley (Fort Worth), Permian Basin (Odessa), West Central Texas (Abilene), Panhandle (Amarillo) and Dallas.

In addition to consulting and teaching, physicians and other health personnel will collect information on number and severity of burns, types of treatment and rehabilitation. They will then plan and implement programs for burn care according to area needs. The program began Nov 1.

This three-year contract is one of six for Regional Burn Demonstration Programs across the country. All have been designated Regional Burn Centers. The Parkland Burn Unit (with burn specialists from the school) is already designated a burn center by American Burn Association (ABA) guidelines, according to Charles Baxter, MD, professor of surgery at Southwestern and project director.

Eye research grants offered by blindness prevention society

The National Society for the Prevention of Blindness has research funds available for small feasibility studies that may lead to advances in blindness prevention. Investigators not currently financed by other research funds are invited to apply.

Grants not exceeding $5,000 annually are made for studies of eye function and disease, and those that may improve diagnosis and treatment. Grants are made for a one-year period; renewal applications are considered for a second year only.

The Society considers the applications throughout the year, and there is no deadline for submission of grant applications.

Application forms for research projects and further information may be obtained by writing to the Committee on Basic and Clinical Research, National Society for the Prevention of Blindness, Inc., 79 Madison Ave, New York, NY 10016.

Medicare increases inpatient hospital deductible

The inpatient hospital deductible under Part A of Medicare will be increased from $124 to $144 for benefit periods beginning in 1978, according to the Secretary of Health, Education, and Welfare.

Under the Social Security Act the Secretary is required to make an annual review of hospital insurance costs under Medicare and, if necessary, to adjust the deductible and related coinsurance amounts for the following calendar year.

For benefit periods starting in 1978, the deductible amount for the first 60 days of inpatient hospital care will be $144; the hospital coinsurance amount for the 61st through 90th day of each benefit period will be $36 a day; and the hospital coinsurance amount for each lifetime reserve day used will be $72 a day.

For the 21st through the 100th day of services in a skilled nursing facility, the coinsurance amount for benefit periods starting in 1978 will be $18 a day.

The new amounts are effective only with benefit periods starting in 1978. The current $124 inpatient hospital deductible and related coinsurance amounts remain in effect for benefit periods which start in 1977, even though the

Here today, Here tomorrow!

Remember a few short months ago when most insurance companies abandoned the medical profession in Texas? And those that stayed escalated their premiums drastically? MALPRACTICE INSURANCE CRISIS it was called.

That situation prompted Texas doctors to organize their own insurance company *of, by* and *for* Texas doctors — AMERICAN PHYSICIANS INSURANCE EXCHANGE. Texas physicians have again demonstrated that they can solve their own problems. Many feel that if this had been done five years earlier — there probably would not have been a crisis.

The API concept has proven to be the most logical answer. Premiums, reasonable to begin with, have recently been reduced 15%. The company's reinsurance is the broadest available, and is backed by the world's largest professional reinsurance group. In API's first year, the number of policyholders has grown markedly and all of them share in the $1,300,000 policyholders surplus and $2,000,000 in assets.

API stepped in when the liability market was at its worst. The company has prospered. It can serve your insurance needs right now. And it will be here tomorrow — come what may.

Fill out and mail the coupon below and we'll contact you promptly with a full explanation of how you can benefit.

AMERICAN PHYSICIANS INSURANCE EXCHANGE
YOUR PROFESSIONAL SECURITY IS OUR POLICY

1400 FRITO-LAY TOWER • DALLAS, TEXAS 75235 • PHONE: (214) 350-6661
IN HOUSTON PHONE: 255-2569

YOUR NAME

SPECIALTY

ADDRESS | CITY | ZIP

( )
PHONE | POLICY RENEWAL DATE

benefit period extends into 1978.

For further information contact the Health Care Financing Administration, Department of Health, Education and Welfare, Baltimore, MD, 21235.

Califano seeks change in Texas PSRO designation

The designation of Professional Standards Review Organization (PSRO) areas in Texas remained unsettled in November.

HEW Secretary Joseph Califano has decided that the earlier approval of a statewide PSRO in Texas was "legally unsupportable."

Califano had asked TMA's cooperation in seeking a stay of the previous court order obtained by TMA which voided the original HEW multiple area PSRO designation in Texas.

Califano wants the court order so that he can designate multiple PSROs in Texas, then conduct a statutory poll of physicians' preferences for single or multiple areas.

The Texas Medical Association has informed Califano that there is no legal barrier to his administratively designating the state as a single PSRO area and that further polling is unnecessary.

The HEW poll conducted in 1976 established that 86% of Texas physicians preferred a single PSRO area designation.

American Medical Association schedules scientific meeting

The 31st Winter Scientific Meeting of the American Medical Association will be held Dec 10-13 at Miami Beach.

For the first time the interim winter session of the AMA's House of Delegates will be held separately from the scientific meeting. The House will convene Dec 4-7 in Chicago.

Programs for the Florida meeting include such topics as the Pill; prevention and treatment of stroke; origins of sex and gender; cosmetic surgery; coronary artery disease; snakebite; and the team doctor in amateur sports. The luncheon programs will be on acupuncture; obesity; menopause; and television's impact on our way of life.

Further information on the meeting is available from the Division of Continuing Medical Studies, American Medical Association, 535 N Dearborn St, Chicago, IL 60610.

Physicians can comment on HEW regulations

Physicians have the opportunity to comment to HEW Sec Joseph Califano concerning problems with all regulations administered by HEW affecting the health care industry.

The five year review project, which is called "Operation Common Sense," consists of a sunset review of all rules and regulations now in force and a revision in the procedures for developing new regulations.

Califano has asked for specific examples of confusing or unfair regulations.

To respond write to Operation Common Sense, Department of Health, Education, and Welfare, Box 536, Washington, DC 20044.

TMA sponsors medical malpractice seminar in Houston

How to avoid malpractice suits and what to do if sued are the topics for the Medical Liability Workshop Dec 16-17 in Houston.

The conference is sponsored by the Malpractice Defense Committee, Inc., and co-sponsored by the Texas Medical Association and the Harris County Medical Society. The fee is $100 and registration is limited to 300.

Featured speakers include W. Page Keeton, JD, former Dean, University of Texas School of Law, and Leonard Berlin, MD, the first physician to win a malpractice countersuit.

The workshop, from 9 am until 4 pm both days, will be in the Jesse Jones Library Building auditorium in Houston.

Other speakers include Arthur Downey, JD, president of the Colorado Trial Lawyers Association; Nelson J. Young, Fort Lauderdale, a professional office consultant; Joe Jamail Jr, JD, Houston, a plaintiff's attorney; and Ace Pickens, JD, Austin, a member of Brown, Maroney, Rose, Baker and Barber, TMA Legal Counsel.

For more information contact Paul Gray, Texas Medical Association, 1801 N Lamar Blvd, Austin, TX, 78701, phone 512-477-6704.

New blood cell separator makes hometown treatment practical

After two years' work a new blood cell separator has been developed that will make aggressive cancer treatment in a patient's hometown practical.

Today's aggressive cancer treatments, particularly x-ray therapy and anti-cancer drugs or a combination of the two, place high levels of stress on the bone marrow where blood components are formed.

"With aggressive treatment, the patient becomes highly susceptible to serious bleeding or infection," says Jeane Hester, MD, who with K. B. McCredie, MD, chief of Leukemia Services, directed the clinical trials of the new separator at The University of Texas M.D. Anderson Hospital and Tumor Institute.

"Bleeding can be controlled with transfusions of platelets and infections controlled with white blood cell transfusions and antibiotics," she says. "Until now the equipment for separating these blood components from whole blood was cumbersome, tedious to handle and sterilize, and needed specially trained personnel to operate effectively."

The key element in the new continuous flow blood cell separator, developed by IBM Corporation, is a disposable plastic channel in which the actual separation of the blood into its different components takes place.

Physician fee rise slows

The rate of increase in physician's fees fell slightly during September, while the rate of increase for other services in the economy rose, according to the US Dept of Labor's Consumer Price Index (CPI).

Physicians' fees rose .6% in September, down from August's rate of .8%, which had been a four-month high. The "all services" index of the CPI rose .7% during September; the "all items" index rose .4%.

The CPI's medical care index as a whole rose slightly higher than physicians' fees, with an increase of .7%. Highest single component during September was the index of dentists' fees, which increased .8%.

Hospital service charges, semi-private room charges, and operating room charges all increased .7% during September.

So far during 1977, physicians' fees have increased 7.3%, compared to 9.8% for the whole medical care index, 6.6% for "all items," and 7.9% for "all services."

During the last 12 months, physicians' fees have risen 9.2%, compared to 9.8% for medical care, 6.6% for all items, and 7.9% for all services.

TMA House of Delegates meets in Austin in November

The TMA House of Delegates met in Austin Nov 12 and 13.

Delegates considered TMA policies on countersuits, National Health Insurance, access to health care, medical practice cost containment, clinical laboratory billing, hospital accreditation, Texas Medical Association reorganization, and other medical topics.

Details on actions and policies of the TMA House of Delegates will be included in the January issue of *Texas Medicine*.

American Medical Association names AMA-ERF scholars

The American Medical Association Education and Research Foundation (AMA-ERF) has named 16 senior medical students as the 1977 Rock Sleyster Scholars. Each student will receive a $2,000 grant for the 1977-78 school year.

The 16 one-year scholarships, totaling $32,000, have been awarded to the medical students on the basis of scholarship, financial need, and demonstrated interest in psychiatry.

The AMA-ERF has helped to increase the number of physicians through a number of other programs as well.

The AMA-ERF has guaranteed loans for more than 65,000 students, interns, and residents since 1962. These loans are valued at more than $80 million.

In 1976, more than $7.8 million in loans were secured through AMA-ERF programs.

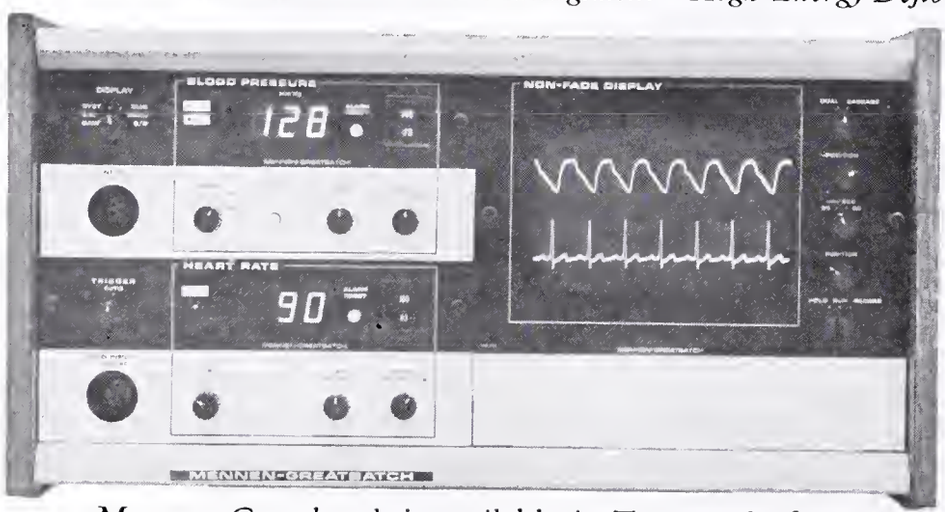
GENTEC FEATURES A TEXAS EXCLUSIVE: MENNEN-GREATBATCH CLINICAL AND DIAGNOSTIC SYSTEMS

Invest in a Mennen-Greatbatch instrument or system from Gentec Hospital Supply and you get more than the leading patient monitoring equipment.

Gentec can assist you with complete department planning and layout, system design and integration, architectural and electrical outlines, educational aids and programs.

And when your MG equipment goes to work, Gentec backs it with 24-hour service and complete warranty coverage.

See Gentec for the complete line of Mennen-Greatbatch systems, including:
Telemetry Monitoring · Microprocessors In-Patient Monitoring
Computer-Assisted Cath Lab · Data-Base Management · High-Energy Defibrillators



Mennen-Greatbatch is available in Texas only from

Gentec
HOSPITAL SUPPLY COMPANY
Division of Foremost-McKesson, Inc. Terrell Supply Division

FORT WORTH/DALLAS, P.O. Box 310 76101, (817) 336-8731, (214) 429-2566 / AMARILLO, P.O. Box 1587 79106, (806) 376-4696
AUSTIN, P.O. Box 4415 78723, (512) 478-2559 / LUBBOCK, P.O. Box 2913 79408, (806) 763-4655 / SAN ANTONIO, P.O. Box 32107 78216, (512) 344-0213 / HOUSTON, P.O. Box 1609 77001, (713) 237-9678

Deserving disadvantaged medical students, particularly those from minority groups, have received more than $1 million in AMA-ERF secured loans, with interest completely subsidized by the AMA-ERF during their medical school years under AMA-ERF's new pilot Student Opportunity Loan program.

The AMA-ERF programs are supported primarily by gifts from individual physicians and the fund raising efforts for the AMA Auxiliary.

Board of Medical Examiners issues 696 licenses

During the Texas State Board of Medical Examiners meeting Aug 26-28 in Austin, 696 licenses were issued by examination.

Of those 696, 661 people had taken the full FLEX Exam, 35 repeated the FLEX exam, and 12 were doctors who had taken FLEX in another state and took only Jurisprudence in Texas.

Thirty-three of the new licensees were from out-of-state schools, 117 from foreign schools, and 546 from Texas schools.

A total of 384 licenses by reciprocity were issued, and 175 of all applicants considered were from foreign schools.

Five duplicate licenses were issued.

Jehovah's Witnesses distribute booklet about blood

The Jehovah's Witnesses have prepared a special booklet on the subject of blood that was to have been delivered to all members of the medical and legal professions in Texas in November.

The book discusses the refusal of Jehovah's Witnesses to accept blood transfusions. The book includes the religion's basis for the position and the ethical, medical, and legal problems raised by the position.

The new booklet is "Jehovah's Witnesses and the Question of Blood." For more information write the Watchtower Bible and Tract Society of New York, Inc., 117 Adams Street, Brooklyn, New York, 11201.

Continuing education directory will be mailed in December

The 1978 Texas Continuing Education Directory for Physicians, listing approximately 200 courses, will be mailed to members of the Texas Medical Association in late December.

The directory, the eighth to be published, also will contain information on more than 50 courses being presented during the Association's 1978 Annual Session in San Antonio. The first directory, printed in 1971, listed a total of 43 continuing education courses.

Also featured in the directory is a list of scientific meetings scheduled for 1978 in Texas.

The directory was compiled and prepared by the *Texas Medicine* staff as part of the Texas Medical Association's continuing education services approved by the Committee on Continuing Education.

Anson Jones award competition announced

The Texas Medical Association has announced its 21st annual Anson Jones Award competition for excellence in communicating health information to the public.

Open to Texas newspapers, magazines, and radio and television stations, the competition is divided into eight separate categories. Each winner receives a $250 cash award and an engraved plaque.

Winning entries are judged on the basis of accuracy, significance, quality, public interest, and impact. Professionals from the fields of publishing and broadcasting will review the entries with the final winners selected by a panel of physicians.

The entry deadline is Dec 10, 1977. Entries must have been published or broadcasted between Dec 1, 1976 and Nov 30, 1977.

Award winners will be announced Feb 1, 1977. Presentations will be made during TMA's annual session in San Antonio in May 1978. The award is named in honor of Anson Jones, MD, a pioneer Texas physician, distinguished writer, and former president of the Republic of Texas.

He was responsible for the establishment of the first regulations concerning the practice of

the healing arts in Texas. While serving as Secretary of State to the Republic, he urged the formation of an "Association of Physicians of the Republic of Texas for the promotion and general diffusion of medical knowledge."

1977 retirement plan deadline is Dec 31

The deadline for establishing a retirement trust HR 10 (KEOGH) plan for 1977 for a self-employed physician is Dec 31, 1977.

The Texas Medical Association offers the KEOGH TMA Members Retirement Trust.

For more information about the retirement plan, contact the Medical Service Department, Texas Medical Association, 1801 N Lamar Blvd, Austin, 78701.

Texas Medical Association coordinates Physician's Placement Service

The Texas Medical Association coordinates a Physician's Placement Service for communities seeking physicians, physicians seeking associates, and physicians seeking locations.

Two publications, "Physicians Seeking Locations in Texas" and "Opportunities for Practice in Texas," are prepared and distributed bimonthly.

Physicians seeking locations receive the list of opportunities while communities and physicians receive the list of physicians available for practice.

The service is provided without charge. For information write the Department of Medical Service, Texas Medical Association, 1905 N Lamar Blvd, Austin, 78705.

Coming next month

Articles scheduled for the January issue are on breast reconstruction, with emphasis on how the general surgeon can help the plastic surgeon; payment of costs for medical examinations of rape victims in Houston; private industry's response to rising health care costs; the demise of the Medicare program in nursing homes; smoking and health; and the economic and political policies of the Texas medical profession in the progressive era.

Investment performance for TMA Members' Retirement Plan and Trust

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1977 Through 10/31	3 Years Ended 12/31/76	5 Years Ended 12/31/76	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	– 8.6%	– 9.3%	– 8.3%	1.8%
Loomis-Sayles Mutual Fund	–11.6%	– 1.6%	– 4.4%	4.0%
Mercantile Bank Equity Fund	– 9.8%	+ 5.9%	–17.8%	4.4%
Mercantile Bank Fixed Income Fund	– 2.2%	+ 0.2%	– 5.5%	7.2%
T Rowe Price Growth Stock Fund	–12.9%	– 2.6%	–16.6%	2.3%
T Rowe Price New Income Fund	– 3.2%	+ 2.7%	N/A	7.7%
Stein Roe & Farnham Balanced Fund	–12.6%	– 0.5%	– 2.7%	3.5%
Standard & Poor 500 Stock Average	–14.1%	+10.4%	+ 5.3%	
Dow Jones Industrial Average	–18.5%	+18.1%	+12.9%	

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

AUSTIN: EXECUTIVE APPOINTMENTS. Gov Dolph Briscoe has appointed John W. Youngblood, MD, Austin, to a six-year term on the Examiners in the Fitting and Dispensing of Hearing Aids. Briscoe has appointed Harold Pieratt, Jr, Giddings, and Homer A. Lamey, San Antonio, to the Board of Pharmacy. Elizabeth L. Kemmell, David A. Garrett, San Antonio; O. Ray Hurst, Austin; and C. Lincoln Williston, Austin, have been appointed to the Advisory Hospital Council for six-year terms to expire July 17, 1983. Gov Briscoe has appointed Jack Miller, San Saba; Exalton A. Delco, Jr, Austin; and Jack Whetsel, McAllen, as consumer representatives on the Texas Family Practice Residency Advisory Committee. Gov Briscoe appointed 39 members to the Health Coordinating Council. Physicians appointed to the board are Per H. Langsjoen, MD, Temple; L. S. Thompson, Jr, MD, Dallas; Louis E. Gibson, MD, Corsicana; and C. B. Jackson, Jr, MD.

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber, Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

WASHINGTON: HEALTH COSTS. Representatives from labor and management have been talking informally for the past nine months searching for joint solutions to rising health care costs. According to a position paper released by AFL-CIO president George Meany, the labor management group has reached broad agreement on some issues. The group has stated that the cost of malpractice insurance has been blamed as a major force behind the upward spiral of health care costs. The labor management group recommends the following steps: lower insurance rates by establishing common insurance pools or setting upper limits on trial awards; elimination of contingent fees for attorneys; tightening licensing of physicians and competency recertification to increase the quality of care; requirement of binding arbitration instead of arbitration; establishment of time limits within which malpractice suits can be filed; and creation of a system similar to worker's compensation or no-fault insurance to cover medical injuries.

WASHINGTON: COST CONTAINMENT LEGISLATION. John Alexander McMahon, president of the American Hospital Association, has testified the Administration's cost containment bill "would seriously jeopardize the present and future ability of hospitals to provide quality care to the American people." Applying a uniform cap on all hospitals "would exert the heaviest pressures where they are least appropriate—on the most efficient hospitals," said McMahon. These facilities would be forced to curtail essential services, according to McMahon. Hospitals purchase and use many services and goods that rise faster in cost than the rest of the market, McMahon testified. Of the 15% rise in hospital costs last year, 10% was purely the result of inflation and five percent "resulted from increased intensity and improvement in patient care."

WASHINGTON: NEW MEDICARE LIST RELEASED. Eight months after publication of an error-ridden list of physicians supposedly receiving substantial Medicare payments in 1975, the government has published a corrected list of physicians receiving large Medicare sums. HEW officials said plans are to prepare a listing of all physicians who receive any Medicare payments in 1976. Estimated preparation cost is from $700,000 to $1,000,000 at the start and $300,000 annually.

NEW YORK: PHYSICIAN ADVERTISING. The New York Board of Regents has issued regulations which permit physicians, dentists, and other professionals to advertise services and prices in newspapers, periodicals, and professional directories. Physicans in New York may advertise fixed prices or a stated range of prices for specified routine professional services, provided any advertisement clearly states whether additional charges may be incurred for related services which may be required in individual cases. Advertising deemed not to be in the public interest and which is prohibited includes advertising that is false, fraudulent, deceptive, misleading, sensational or flamboyant; uses testimonials; guarantees any service; offers gratuitous service or discounts in connection with professional services; makes claims of professional superiority which cannot be substantiated; and advertises fees in a manner not otherwise permitted by regulations.

WASHINGTON: AMA ACTIVITIES. The AMA had submitted 90 testimonies, statements, or letters to Congress and federal administrative agencies on various topics as of Oct. 1.

WASHINGTON: MEDICAL MALPRACTICE. A member of the American Bar Association's Commission on Medical Professional Liability says that the crisis, cost, and availability of medical malpractice insurance is only in a temporary lull and is poised for a new spiral that could cause the legal recovery system to collapse shortly after 1980. The view of James A. Ludlam, Los Angeles, counsel for the California Hospital Association, is that the present efforts to handle the problem have only bought some time. Ludlam made his remarks during a panel discussion sponsored by the ABA section on insurance, negligence, and compensation law. He said the underlying problem, primarily the amount of recovery, still has not been solved and he warned that unless this problem is dealt with, the tort system will be in jeopardy and could collapse under an unmanageable number of claims and claim costs.

PENNSYLVANIA: MANDATORY SERVICE. The Pennsylvania House of Representatives has approved a proposal requiring medical schools receiving state funds to provide a quota of physicians for medically deprived areas. The bill would require medical schools to set aside 10% of their admissions for students who agree to work for four years in areas that have critical shortages of physicians.

WASHINGTON: HEALTH PLANNING EXTENSION BILL PASSES. President Carter has signed into law the Health Service Extension Act of 1976 (PL 95-83), extending the National Health Planning and Resources Development Act of 1974 for one year.

WASHINGTON: NATIONAL HEALTH PLANNING COUNCIL. Six new members, including Gov John D. Rockefeller, IV, West Virginia, have been named to the National Council on Health Planning and Development by the HEW Secretary. Others named are Sally Berger, Chicago community leader; Samuel Philip Caper, MD, vice chancellor for health affairs and professor of medicine at the University of Massachusetts Medical Center; Phyllis Landrieu, New Orleans public relations and advertising executive; Frank S. Royal, MD, a private physician of Richmond, Virginia; and Thomas Turner, Detroit labor leader.

KENTUCKY: INSURANCE FIRM. Kentucky Medical Association House of Delegates has approved a resolution asking the medical society to attempt to establish its own professional liability insurance company.

Wichita Falls Clinic

501 Midwestern Parkway East, Wichita Falls, Texas 76302

GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.

GENERAL THORACIC AND VASCULAR SURGERY
Cecil H. Meares, M.D.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
Richard H. Moore, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOLOGY AND RADIOACTIVE ISOTOPES
Thomas K. Bose, M.D.
Matthew Powers, M.D.

PEDIATRICS
Joseph Bilder, Jr., M.D.
George W. Slaughter, M.D.

INTERNAL MEDICINE
P. K. Smith, M.D., F.A.C.P.
I. L. Humphrey, Jr., M.D.
Preston McCall, M.D.
Julian C. Sleeper, M.D., Cardiology
David M. Pogue, M.D., Cardiology
Wendell I. Wyatt, M.D.
Lowell L. Harvey, M.D., Pulmonary

FAMILY PRACTICE
J. B. Hathorn, Jr., M.D.
Melvin Horany, M.D.
James T. Cook, M.D.
Madeleine Kent, M.D.

UROLOGY
John C. Wurster, M.D.

OBSTETRICS AND GYNECOLOGY
Warren T. Kable, M.D.
Frank J. Lee, M.D.

ADMINISTRATIVE OFFICER
James M. Missler, Administrator

Taos Medical Symposium

Announcing the Fifth Annual Symposium
February 14-18, 1978 Taos, New Mexico
14 hours CME credit applied for from AAFP and AMA
Topics covering:

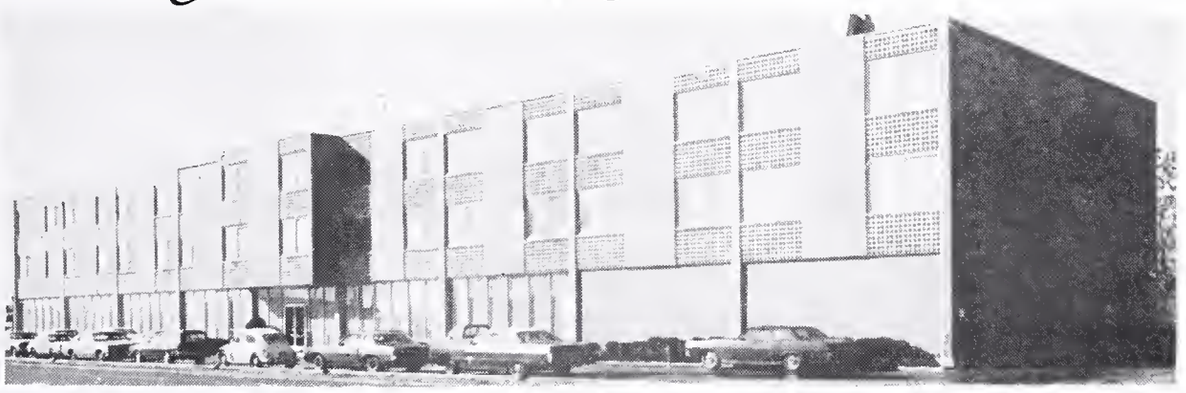
Cardiology (4 hrs.) G.I. Problems (4 hrs.)
Rheumatology (4 hrs.) Dermatology (2 hrs.)

Additional activities with special four-day group rates scheduled at Taos Ski Valley.

Advance registration required. Registration fee of $100.00 includes continental breakfast for two each morning, transfers each day to and from the ski area, cross country ski trips, tours of local museums and art galleries, and hosted receptions. Registration deadline January 31, 1978. Limited to 100 participants.

For further information contact:
Albuquerque & Bernalillo County
Medical Association
2650 Yale Blvd., SE Suite 103
Albuquerque, New Mexico 87106
Phone (505) 247-3711

Arlington Neuropsychiatric Center



A PRIVATE PSYCHIATRIC HOSPITAL ADULT UNIT ADOLESCENT UNIT

COMPLETE ACCREDITED FACILITIES, SERVICES AND PROGRAMS, INCLUDING SCHOOL, FOR THE CARE AND TREATMENT OF BOTH ADULT AND ADOLESCENT PATIENTS.

PSYCHIATRY
RICHARD J. CANCEMI, M.D.
ARMANDO DESALOMS, M.D.
JAMES C. HANCOCK, M.D.
RALPH HODGES, M.D.
ROBERT C. KNIPSTEIN, M.D.
SUE L. NICKEY, M.D.
CARL E. RENFRO, M.D.
MURRAY C. SKAGGS, M.D.
THOMAS C. TIPS, M.D.
S. CECIL WAHBY, M.D.

PSYCHOLOGY
ANN TUCKER, Ph.D.

SOCIAL WORK
WILLIAM PORTWOOD, MSW

ACTIVITIES THERAPY
GAIL LANE, OTR

ADMINISTRATOR
JAMES H. BINGHAM, JR.

BLUE CROSS AND CHAMPUS APPROVED **MEDICARE CERTIFIED**

701 WEST RANDOL MILL ROAD, ARLINGTON, TEXAS 76012

ADMISSIONS ACCEPTED ON 24-HOUR BASIS (817) 261-3121

MEETINGS

COLLEGE OF MEDICINE, TEXAS A&M UNIVERSITY

Selection and Safe Operation of Medical Equipment is the theme of a seminar to be presented Dec 9-10, 1977, at Rudder Center, on the Texas A&M University campus in College Station, Tex. The program meets the criteria for 11 hours in Category 1 of the AMA Physician's Recognition Award.

Contact: Dr Lee J Phillips, Texas Engineering Extension Service, FE Drawer K, College Station, Tex 77843.

THE INSTITUTE OF HEMOTHERAPY

The Institute of Hemotherapy, Education Division, and UT System Cancer Center, M. D. Anderson Hospital and Tumor Institute, will sponsor a symposium on clinical hemostasis Dec 10, 1977. The symposium will meet in Room 1302 of the UT Medical School at Houston, beginning at 8 am. The meeting will adjourn at 3:45 pm. There is a $10 registration fee. The program meets the criteria for 6 hours under Category 1 of the AMA Physician's Recognition Award.

Contact: Janet M Worth, Director of Education, The Institute of Hemotherapy, Education Division, 405 Jesse Jones Library Bldg, Houston 77030.

TEXAS DEPARTMENT OF MENTAL HEALTH AND MENTAL RETARDATION

Dec 9-10, 1977 are the dates of Mental Illness in Children, an advanced seminar designed to assist psychiatrists, other physicians, and mental health professionals who work with children in institutional, community and private settings. The program is sponsored by the Texas Department of Mental Health and Mental Retardation, Texas Research Institute of Mental Sciences, and Baylor College of Medicine. It is the last in a series of three regional workshops and takes place at TDMHMR's Central Office Auditorium, 909 W 45th St, Austin, Tex.

Contact: Office of Medical Services Continuing Education, Texas Department of Mental Health and Mental Retardation, Box 12668, Capitol Station, Austin, Tex 78711.

CURRENT NATIONAL MEETINGS

AMERICAN PUBLIC HEALTH ASSOCIATION, New and Innovative Practices in Child Abuse and Neglect, Holiday Inn—Airport, Atlanta, Dec 7-9, 1977. Workshop designed to provide basic background on nature, extent of child abuse, neglect, and methods for management to public health workers not familiar with subject area; to provide advanced information on techniques, procedures for identification, management of child abuse, neglect, and on development of public health, public health education programs for public health professionals with backgrounds in child abuse, neglect; to provide forum for discussion, development of public health policy on child abuse, neglect for public health professionals in policy-making, administrative positions. Faculty includes Glen S Bartlett, MD; Carol Cox, RN, MPR; David A Spence, MPH, MD; Stephen D Wilhide, MSW, MPH. Tuition: American Public Health Association members, $100; nonmembers, $120. Contact: Continuing Professional Education, American Public Health Association, 1015 18th St, NW, Washington, DC, 20036.

FOOD AND DRUG LAW INSTITUTE, FOOD AND DRUG ADMINISTRATION, 21st Annual Educational Conference, Washington Hilton Hotel, Washington, DC, Dec 13-14, 1977. Sessions on food, human drugs, animal drugs, cosmetics, medical devices, biologics, radiological health. Annual banquet honoring Richard A Merrill, former features in-depth look at Phase IV testing. Speakers representing FDA, drug industry, medical profession, private counsel will explore expectations, real effect of Phase IV testing, pending legislation, practical concerns. Consumer commentor will add consumer perspective during discussion. Controversial problems associated with food composition will be aired by representatives of FDA, consumers, drug industry. Session on medical devices remarks on 510(k) submissions; exemptions for devices for investigational use (IDEs); FDA inspections, document availability; federal preemption. Contact: The Food and Drug Law Institute, 818 Connecticut Ave, NW, Washington, DC 20006.

For other courses and symposia, see Continuing Education Courses, pp 30-31.

DECEMBER

■ AMERICAN ACADEMY OF DERMATOLOGY, Dallas, Dec 3-8, 1977. Bradford W Claxton, Exec Dir, 820 Davis St, Evanston, Ill 60201.

AMERICAN ASSOCIATION OF GYNECOLOGICAL LAPAROSCOPISTS, San Francisco, Dec 7-11, 1977. Jordan M Phillips, Exec Officer, 11239 S Lakewood Blvd, Downey, Calif 90241.

■ AMERICAN COLLEGE OF CHEMOSURGERY, Dallas, December 1977. GR Mikhail, MD, Sec-Treas, 2 Elmsleigb Lane, Grosse Pointe, Mich 48230.

■ AMERICAN COLLEGE OF PHYSICIANS, Texas (Northern) Regional Meeting, Dallas, Dec 1-3, 1977. Albert D Roberts, Jr, MD, FACP, UT Health Science Center, 5323 Harry Hines Blvd, Dallas 75235.

AMERICAN MEDICAL ASSOCIATION, Chicago, Dec 4-7, 1977. 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL ASSOCIATION, 31st Winter Scientific Meeting, Miami, Dec 10-13, 1977, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL TENNIS ASSOCIATION, Palm Springs, Calif, Dec 7-11, 1977. WJ Drake, Exec Dir, Box 183, Alton, Ill 62002.

SOUTHERN SURGICAL ASSOCIATION, Hot Springs, Va, Dec 5-7, 1977. WR Warren, MD, Sec, Emory University Hospital, Atlanta 30322.

■ SOUTHWESTERN GYNECOLOGIC ASSEMBLY, Dallas, Dec 1-3, 1977. 3630 Noble Ave, Dallas 75204.

JANUARY

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Bal Harbour, Fla, Jan 28-Feb 3, 1978. Ms M Trueblood, Sec, 6 N Michigan Ave, Chicago 60602.

SOCIETY OF THORACIC SURGEONS, Orlando, Fla, Jan 23-25, 1978. 111 E Wacker Dr, Cbicago, 60601.

SOUTHERN CLINICAL NEUROLOGICAL SOCIETY, San Juan, PR, Jan 16-20, 1978. BL Bercaw, MD, Sec-Treas, 1011 Jeffords St, Clearwater, Fla 33516.

■ TEXAS MEDICAL ASSOCIATION, Winter Conference, Austin, Tex, Jan 20-22, 1978. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.

■ TEXAS SOCIETY OF PATHOLOGISTS, Austin, Tex, Jan 27-29, 1978. Iris Wenzel, 1905 N Lamar Blvd, Austin, Tex 78705.

■ UNITED CEREBRAL PALSY ASSOCIATION OF TEXAS, INC, Austin, Tex, Jan 14-15, 1978. San Jacinto Bldg, Suite 201, Ninth and San Jacinto, Austin, Tex 78701.

FEBRUARY

AMERICAN ACADEMY OF ALLERGY, Phoenix, Ariz, Feb 25-Mar 1, 1978. Raymond G Slavin, MD, Exec Off, 1402 S Grand, St Louis 63104.

■ AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Dallas, Feb 23-28, 1978. Charles V Heck, MD, Exec Dir, 430 N Micbigan Ave, Chicago 60611.

AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS, Key Largo, Fla, Feb 22-26, 1978. RA Straffon, MD, Sec-Treas, 2020 E 93rd St, Cleveland 44106.

AMERICAN COLLEGE OF PSYCHIATRISTS, New Orleans, Feb 8-12, 1978. JC Nemiah, MD, Admn Officer, Beth Israel Hospital, 330 Brookline Ave, Boston 02215.

■ AMERICAN COLLEGE OF SURGEONS, SOUTH TEXAS CHAPTER, Houston, Feb 2-4, 1978. Peter B Fisher, MD, Pres, 615 Medical Towers Bldg, Houston 77025.

AMERICAN GROUP PSYCHOTHERAPY ASSOCIATION, New Orleans, Feb 21-25, 1978. Ms MS Block, Exec Sec, 1995 Broadway, 14th Fl, New York 10023.

■ AMERICAN ORTHOPAEDIC FOOT SOCIETY, Dallas, Feb 22-23, 1978. RA Mann, MD, Sec, 3334 Webster St, Oakland, Calif 94609.

■ AMERICAN SOCIETY FOR SURGERY OF THE HAND, Dallas, Feb 19-24, 1978. RJ Smith, MD, Sec, Dept of Orthopaedics, Massachusetts General Hospital, Fruit St, Boston 02114.

ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL INSTRUMENTATION, Chicago, Feb 25-Mar 1, 1978. MJ Miller, JD, Exec Dir, 1901 N Ft Myer Dr, Suite 602, Arlington, Va 22209.

ASSOCIATION OF CONVALESCENT HOMES AND HOSPITALS FOR ASTHMATIC CHILDREN, Phoenix, Ariz, Feb 23-24, 1978. I Friedman, Exec Vice-pres, Spring Valley Rd, Ossining, NY 10562.

■ DISTRICT I MEDICAL SOCIETY, TEXAS MEDICAL ASSOCIATION, El Paso, Tex, Feb 11, 1978. Laurance N Nickey, MD, 1515 N Oregon St, El Paso, Tex 79902.

FEDERATION OF WESTERN SOCIETIES OF NEUROLOGICAL SCIENCES, INC, San Francisco, Feb 23-26, 1978. Leon G Kaseff, MD, Prog Chmn, 1783 El Camino Real, Burlingame, Calif 94010.

SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, Jackson, Miss, Feb 21-24, 1978. Marti Ginest, Exec Sec, 4300 N Lamar Blvd, Austin, Tex 78756.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, ALAMO CHAPTER, San Antonio, Tex, Feb 17-19, 1978. Raymond Hernandez, Jr, MD, Gen Chmn, 2200 McCullough Ave, San Antonio, Tex 78212.

WESTERN MEDICAL SOCIETY FOR THE STUDY OF TRAUMA, Steamboat Springs, Colo, Feb 18-25, 1978. AA Torre, MD, Sec-Treas, 3797 E Shields, Fresno, Calif 93728.

MARCH

AMERICAN COLLEGE OF CARDIOLOGY, Anaheim, Calif, Mar 6-9, 1978. William D Nelligan, CAE, Exec Officer, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS, Atlanta, Mar 29-31, 1978. 1718 Gallagher Rd, Norristown, Pa 19401.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, New Orleans, Mar 19-23, 1978. Lois Neary, Exec Officer, 1430 Tulane Ave, New Orleans 70112.

AMERICAN FERTILITY SOCIETY, New Orleans, Mar 29-Apr 1, 1978. HH Thomas, MD, Medical Dir, 1608 13th Ave S, Suite 101, Birmingham, Ala 35205.

AMERICAN PSYCHOSOMATIC SOCIETY, Washington, DC, Mar 30-Apr 1, 1978. MA Hofer, MD, Sec-Treas, 265 Nassau Rd, Roosevelt, NY 11575.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, Las Vegas, Nev, Mar 10-15, 1978. BF Alfano, MD, Exec Sec, 675 Main St, Melrose, Mass 02176.

AMERICAN SOCIETY OF REGIONAL ANESTHESIA, San Francisco, Mar 18-19, 1978. H Carron, Sec-Treas, Box 11083, Richmond, Va 23230.

ASSOCIATION FOR HOSPITAL MEDICAL EDUCATION, Atlanta, Mar 22-26, 1978. Ms GM Coleman, Admn Dir, 1911 Jefferson Davis Hwy, Suite 905, Arlington, Va 22202.

CALIFORNIA MEDICAL ASSOCIATION, San Francisco, Mar 17-22, 1978. WW Babb, Exec Dir, 731 Market St, San Francisco 94103.

INTERNATIONAL ACADEMY OF PATHOLOGY, INC, Atlanta, Mar 6-10, 1978. Leland D Stoddard, MD, Sec-Treas, Department of Pathology, Medical College of Georgia, Augusta, Ga 30902.

INTERNATIONAL ENDORADIOTHERAPY SYMPOSIUM, Los Angeles, Mar 10-12, 1978. JA Lipsett, MD, Department of Radiology, Los Angeles County-University of Southern California Medical Center, 1200 N State St, Los Angeles 90033.

INTRAOCULAR LENS SYMPOSIUM, Los Angeles, Mar 14-18, 1978. KJ Hoffer, MD, Chmn, American Intraocular Implant Society, Box 3140, Santa Monica, Calif 90403.

APRIL

AMERICAN CLEFT PALATE ASSOCIATION, Atlanta, Apr 5-8, 1978. Mrs Flora P Berk, Admn Sec, 331 Salk Hall, University of Pittsburgh, Pittsburgh 15261.

AMERICAN COLLEGE OF ALLERGISTS, Las Vegas, Nev, Apr 1-6, 1978. 2141 14th St, Boulder, Colo 80302.

AMERICAN GERIATRICS SOCIETY, INC, Atlanta, Apr 13-14, 1978. Mrs Kathryn S Henderson, Exec Dir, 10 Columbus Circle, New York 10019.

AMERICAN COLLEGE OF PHYSICIANS, Boston, Apr 17-20, 1978. RH Moser, MD, Exec Vice-pres, 4200 Pine St, Philadelphia 19104.

AMERICAN COLLEGE OF RADIOLOGY, San Diego, Apr 9-14, 1978. WC Stronach, Exec Dir, 20 N Wacker Dr, Chicago 60606.

AMERICAN LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL SOCIETY, Palm Beach, Fla, Apr 25-27, 1978. RL Ruggles, MD, Exec Sec, c/o Ann Holm, 2954 Dorman Rd, Broomall, Pa 19008.

AMERICAN PHYSIOLOGICAL SOCIETY, Atlantic City, NJ, Apr 9-14, 1978. OE Reynolds, PhD, Exec Sec-Treas, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN MEDICAL SOCIETY ON ALCOHOLISM, St Louis, Apr 27-May 3, 1978. JG Chen See, MD, Sec, 733 Third Ave, New York 10017.

ILLINOIS STATE MEDICAL SOCIETY, Chicago, Apr 1-5, 1978. RN White, Exec Admn, 55 E Monroe St, Suite 3510, Chicago 60603.

MEDICAL ASSOCIATION OF GEORGIA, Jekyll Island, Ga, Apr 21-23, 1978. JM Moffett, Exec Dir, 938 Peachtree St NE, Atlanta 30309.

NEBRASKA MEDICAL ASSOCIATION, Lincoln, Neb, Apr 30-May 3, 1978. KE Neff, Exec Sec, 1901 First National Bank, Lincoln, Neb 68508.

PAN-PACIFIC SURGICAL ASSOCIATION, Honolulu, Apr 1-7, 1978. Cesar B deJesus, MD, Sec, Public Relations, Room 237, Alexander Young Bldg, Honolulu 96813.

■ SOCIETY FOR BIOMATERIALS, San Antonio, Tex, Apr 29-May 2, 1978. C William Hall, MD, Program Committee Co-Chmn, 8500 Culebra Rd, San Antonio, Tex 78284.

STATE MEDICAL SOCIETY OF WISCONSIN, Milwaukee, Apr 13-15, 1978. ER Thayer, Sec and Gen Mgr, 330 E Lakeside, Madison, Wis 53701.

TENNESSEE MEDICAL ASSOCIATION, Knoxville, Tenn, Apr 12-15, 1978. LH Williams, Exec Dir, 112 Louise Ave, Nashville, Tenn 37203.

MAY

AMERICAN ACADEMY OF FACIAL PLASTIC AND RECONSTRUCTIVE SURGERY, Palm Beach, Fla, May 1978. ME Tardy, Jr, MD, Sec, 2800 Lake Shore Dr, Chicago 60657.

■ AMERICAN ACADEMY OF PEDIATRICS, TEXAS CHAPTER, San Antonio, Tex, May 13, 1978. William S Conkling, MD, Chmn, Box 311, Navasota, Tex 77868.

AMERICAN ACADEMY OF PSYCHOANALYSIS, Atlanta, May 5-7, 1978. Ms C Bruskin, Exec Sec, 40 Gramercy Park N, New York 10010.

AMERICAN ASSOCIATION OF CLINICAL UROLOGISTS, Washington, DC, May 19-20, 1978. BH Farber, Jr, Admn Officer, 2017 Walnut St, Philadelphia 19103.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, New Orleans, May 8-10, 1978. WT Maloney, Exec Sec, 6 Beacon St, Suite 620, Boston 02108.

■ AMERICAN COLLEGE OF CHEST PHYSICIANS, TEXAS CHAPTER, San Antonio, Tex, May 13, 1978. Charles B Shuey, Jr, MD, Pres, 3500 Gaston Ave, Dallas 75246.

AMERICAN COLLEGE OF LEGAL MEDICINE, San Francisco, May 5-7, 1978. Ms B Hanna, Exec Sec, 1340 N Astor St, Suite 2608, Chicago 60610.

AMERICAN LUNG ASSOCIATION, Boston, May 14-17, 1978. WF Roberts, Acting Mng Dir, 1740 Broadway, New York 10019.

AMERICAN PEDIATRIC SURGICAL ASSOCIATION, Hot Springs, Va, May 3-6, 1978. JA O'Neill, Jr, MD, Sec, Department of Pediatric Surgery, Vanderbilt University Hospital, Nashville, Tenn 37232.

AMERICAN PSYCHIATRIC ASSOCIATION, Atlanta, May 8-12, 1978. Dr M Sabshin, Med Dir, 1700 18th St NW, Washington, DC 20009.

AMERICAN PSYCHOANALYTIC ASSOCIATION, Atlanta, May 3-7, 1978. Ms H Fischer, Admn Dir, One E 57th St, New York 10022.

AMERICAN SOCIETY FOR GASTROINTESTINAL, Las Vegas, Nev, May 24, 1978. WT Maloney, Exec Sec, 6 Beacon St, Suite 620, Boston 02108.

AMERICAN SOCIETY OF INTERNAL MEDICINE, San Francisco, May 4-7, 1978. WR Ramsey, Exec Dir, 535 Central Tower Bldg, 703 Market St, San Francisco 94103.

■ FLYING PHYSICIANS ASSOCIATION, TEXAS CHAPTER, San Antonio, Tex, May 11, 1978. M Young Stokes III, MD, Pres, 331 W Morton St, Denison 75020.

■ INTERNATIONAL COLLEGE OF SURGEONS, TEXAS STATE SURGICAL DIVISION, San Antonio, Tex, May 11, 1978. Vincent T Caldarola, MD, Pres, 1001 Rosa Verde Towers, San Antonio, Tex 78205.

OKLAHOMA STATE MEDICAL ASSOCIATION, Oklahoma City, May 4-7, 1978. D Bickham, Exec Dir, 601 NW Expressway, Oklahoma City 73118.

SOCIETY OF BIOLOGICAL PSYCHIATRY, Atlanta, May 4-7, 1978. Dr AW Epstein, Sec-Treas, 1430 Tulane Ave, New Orleans 70112.

■ TEXAS AIR-MEDICS ASSOCIATION, San Antonio, Tex, May 11, 1978. David F Eanes, Jr, MD, Pres, 518 N Fifth St, Temple, Tex 76501.

■ TEXAS ASSOCIATION OF NEUROLOGICAL SURGEONS, San Antonio, Tex, May 12, 1978. Robert A Partain III, MD, Vice-Pres & Prog Chmn, 510 Madison Professional Bldg, San Antonio, Tex 78215.

■ TEXAS ASSOCIATION OF PHYSICIANS IN NUCLEAR MEDICINE, San Antonio, Tex, May 13, 1978. Stanley E Hodges, Jr, MD, Pres, 3434 Swiss Ave #20, Dallas 75204.

■ TEXAS ASSOCIATION OF PUBLIC HEALTH PHYSICIANS, San Antonio, Tex, May 11, 1978. John L Bradley, MD, Pres, Box 10736, El Paso, Tex 79997.

■ TEXAS DERMATOLOGICAL SOCIETY, San Antonio, Tex, May 12, 1978. James H Strauch, MD, Prog Chmn, 4K Medical Professional Bldg, San Antonio, Tex 78212.

■ TEXAS DIABETES AND ENDOCRINE ASSOCIATION, San Antonio, Tex, May 12, 1978. Jaime A Davidson, MD, Vice-Pres, 301 W Colorado, Dallas 75208.

■ **TEXAS MEDICAL ASSOCIATION, Annual Session, San Antonio, Tex, May 10-14, 1978. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.**

■ TEXAS NEUROLOGICAL SOCIETY, San Antonio, Tex, May 12, 1978. Harold Skaggs, Jr, MD, Pres, 801 W 34th St, Austin, Tex 78705.

■ TEXAS OCCUPATIONAL MEDICAL ASSOCIATION, San Antonio, Tex, May 11, 1978. Joseph F Peters, Jr, MD, Pres, Box 1616, Cleburne, Tex 76031.

■ TEXAS OPHTHALMOLOGICAL ASSOCIATION, San Antonio, Tex, May 12, 1978. Rodolfo E Margo, MD, Pres, Mid-Valley Medical Arts Building, Weslaco, Tex 78596.

■ TEXAS ORTHOPAEDIC ASSOCIATION, San Antonio, Tex, May 13, 1978. David P Green, MD, Prog Chmn, Division of Orthopaedic Surgery, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio, Tex 78284.

■ TEXAS OTOLARYNGOLOGICAL ASSOCIATION, San Antonio, Tex, May 12, 1978. Bernard L Yollick, MD, Vice-Pres, 5925 Forest Lane, Dallas 75230.

■ TEXAS PHYSICAL MEDICINE & REHABILITATION SOCIETY, San Antonio, Tex, May 12, 1978. Kenneth B Washburn, MD, Sec, 7703 Floyd Curl Dr, San Antonio, Tex 78284.

■ TEXAS RHEUMATISM ASSOCIATION, San Antonio, Tex, May 13, 1978. Alfred Miller, MD, Pres, 906 Oak Hills Medical Bldg, San Antonio, Tex 78229.

■ TEXAS SOCIETY OF ATHLETIC TEAM PHYSICIANS, San Antonio, Tex, May 12, 1978. C David Campbell, MD, Prog Chmn, 205 S 15th St, Corsicana, Tex 75110.

■ TEXAS SOCIETY OF COLON AND RECTAL SURGEONS, San Antonio, Tex, May 13, 1978. Raul Ramos, MD, Sec-Treas, 311 Camden, San Antonio, Tex 78215.

■ TEXAS SOCIETY OF PLASTIC SURGEONS, San Antonio, Tex, May 12, 1978. Robert W Wood, Jr, MD, Vice-Pres, 1213 Hermann Dr, Suite 885, Houston 77030.

THE ANXIETY-SPECIFIC.

- a predictable pattern of patient response
- seldom associated with serious side effects, in proper dosage
- rarely interferes with mental acuity
- used concomitantly with many primary medications
- three dosage strengths meet most patient needs

LIBRIUM® Ⓘⓥ

chlordiazepoxide HCl/Roche

5mg, 10mg, 25mg capsules

Libritabs® (chlordiazepoxide) available in 5 mg, 10 mg and 25 mg tablets.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) *Capsules,* 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) *Tablets,* 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley New Jersey 07110

Please see following page.

THE ANXIETY-SPECIFIC.

Since its discovery in the research laboratories at Roche, Librium has been the object of ongoing pharmacologic and clinical investigation.

The published record on Librium is enormous. So large, in fact, we put it into a computer literature retrieval system to make it more accessible in answering your inquiries.*

It's a record that reveals a consistent pattern of patient response. A highly favorable benefits-to-risk ratio. And minimal interference with many primary medications.

Doing one thing well. Basically, that's what Librium is all about.

LIBRIUM® ℞
chlordiazepoxide HCl/Roche

ROCHE

*If you have a question about Librium or any other Roche product, write to Professional Services, Roche Laboratories, Nutley, New Jersey 07110.

Please see preceding page for a summary of product information.

CONTINUING EDUCATION COURSES

DECEMBER

Cardiovascular Disease

Title: Selected Topics in Cardiology
Sponsor: UT Health Science Center at Houston
Dates: Dec 6-8, 1977
Duration: Continuous, 10 total course hours
Designed For: General practitioners; Specialists; Elementary and advanced students of Cardiology
Credit: AAFP; Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Obstetrics & Gynecology

Title: To be announced
Sponsor: Southwestern Gynecologic Assembly
Location of Course: Sheraton-Dallas Hotel, Dallas
Dates: Dec 1-3, 1977
Duration: Continuous; 15 total course hours
Fee: $150
Designed For: Specialists in Obstetrics & Gynecology
Credit: Category 1, AMA Physician's Recognition Award; 25 cognates, American College of Obstetricians & Gynecologists
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: R. Mainord Todd, MD, 8226 Douglas, Dallas 75225

Ophthalmology

Title: Contact Lens Course
Sponsor: Baylor College of Medicine
Dates: Dec 1-3, 1977
Duration: Continuous; 3 days
Fee: $200
Designed For: Specialists in Ophthalmology
Teaching Methods: Audiovisual materials, enrollee performs procedure, lecture, open question
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Pediatrics

Title: Pediatrics for the Practitioner
Sponsor: UT Health Science Center at San Antonio
Location of Course: La Mansion Motor Hotel, San Antonio; UT Health Science Center at San Antonio
Dates: Dec 16-18, 1977
Fee: $165
Credit: 16 hours, AAFP Prescribed; Category 1, AMA Physician's Recognition Award
Contact: William T. Kniker, MD, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Psychiatry

Title: Phenomenology and Treatment of Anxiety
Sponsor: Department of Psychiatry, Baylor College of Medicine, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Dec 1-2, 1977
Duration: Continuous
Fee: $150
Designed For: General practitioners; Specialists in Psychiatry, Internal Medicine, Family Medicine
Credit: 16 hours, Category 1, AMA Physician's Recognition Award
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Other

Title: Physiologic Basis in the Care of the Trauma Patient
Sponsors: Department of Surgery, Southwestern Medical School; UT Health Science Center at Dallas; A. Webb Roberts Center for Continuing Education
Location of Course: Richardson Lecture Hall, D1.502, UT Health Science Center at Dallas
Date: Dec 3, 1977
Fee: $50
Enrollment: Maximum, 225
Credit: 6 hours, AMA Psyhician's Recognition Award
Contact: Norma Wilcox, Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

JANUARY

Adolescents' Medical Care

Title: "A is for Adolescents at Risk, and . . .," Fourth Annual Conference, San Antonio Child Abuse Council
Sponsors: San Antonio Child Abuse Council; UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio
Date: Jan 19-20, 1978
Duration: Continuous, 2 days; 8 hours instruction per day; Thursday-Friday; 8 am-5 pm; 11 total course hours
Fee: $25
Designed For: Specialists in Adolescents' Medical Care, Psychiatry
Enrollment: Maximum, 350
Credit: Category 1, AMA Physician's Recognition Award; 11 hours
Teaching Methods: Lecture, workshop
Contact: Barbara Woods, Coordinator, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Cardiology

Title: Exercise Therapy for the Cardiac Patient
Sponsor: Department of Physical Medicine, Department of Medicine, Baylor College of Medicine, Houston
Location of Course: Holiday Inn-Medical Center, 6701 S Main, Houston
Date: Jan 27-28, 1978
Duration: Continuous; 2 days; Friday-Saturday
Fee: $75
Designed For: General practitioners; Specialists in Cardiology
Credit: Category 1, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund, Houston 77030

Gastroenterology

Title: Review Course in Gastroenterology and Infectious Diseases
Sponsor: Baylor College of Medicine, Houston
Location of Course: Stella Solaris Cruise Ship (Caribbean)
Date: Jan 29-Feb 10, 1978
Duration: Continuous; 13 days; 36 total course hours
Designed For: Specialists in Gastroenterology, Infectious Disease, Internal Medicine
Credit: Category 1, AMA Physician's Recognition Award; 36 hours
Teaching Methods: Audiovisual materials, lecture
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund, Houston 77030

Internal Medicine

Title: Eighth Annual G.P.A. Forde Memorial Lecture Series
Sponsor: Division of Continuing Education, UT Health Science Center at Houston
Location of Course: St Elizabeth Hospital, 4514 Lyons, Houston
Date: January 1978
Duration: Continuous; 1 day; 6 total course hours
Fee: To be announced
Designed For: General practitioners; Specialists in Family Medicine
Enrollment: Open
Credit: AAFP; Category 1, AMA Physician's Recognition Award: 6 hours
Teaching Methods: Lecture
Contact: Sam A. Nixon, MD, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Neurology

Title: Practical Neurology for Family Physicians and Internists
Sponsor: Department of Neurology, Baylor College of Medicine, Houston
Location of Course: Holiday Inn-Medical Center, 7601 S Main, Houston
Date: Jan 13-15, 1978
Duration: Continuous; 3 days; Friday-Sunday; 16 total course hours
Fee: $125
Designed For: General practitioners; Specialists in Neurology, Physical Medicine & Rehabilitation
Credit: AAFP Prescribed; Category 1, AMA Physician's Recognition Award; 16 hours
Teaching Methods: Audiovisual materials, lecture
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund, Houston 77030

Obstetrics & Gynecology

Title: Current Obstetric and Gynecologic Practice
Sponsor: San Antonio Obstetrical and Gynecological Society
Location of Course: Oak Hills Motor Inn, 7401 Wurzbach, San Antonio
Date: Jan 19-25, 1978
Duration: Continuous; 7 days; 6 hours instruction per day; Thursday-Wednesday; 41 total course hours
Fee: $400
Designed For: General practitioners; Specialists
Enrollment: Maximum, 150
Credit: AAFP Elective; Category 2, AMA Physician's Recognition Award; 41 hours
Teaching Methods: Audiovisual materials, lecture, open question, seminar
Contact: Carl J. Pauerstein, MD, Professor of Obstetrics & Gynecology, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Psychiatry

Title: Electroconvulsive Therapy: A Modern Perspective
Sponsors: Department of Psychiatry, Office of Continuing Medical Education, Texas Tech University School of Medicine, Lubbock; American Psychiatric Association
Location of Course: Hilton Inn, El Paso
Date: Jan 13-14, 1978
Duration: Continuous; 2 days; 9-6 hours instruction per day; Friday-Saturday; 15 total course hours
Fee: $150
Designed For: Specialists in Psychiatry, Psychology
Credit: American Psychiatric Association
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: Roy C. Allen, EdD, Director, Continuing Medical Education, Texas Tech University School of Medicine, Box 4569, Lubbock 79409

Title: Psychiatry and Women
Sponsor: Department of Psychiatry,

Baylor College of Medicine, Houston
Location of Course: Warwick Hotel, Houston
Date: Jan 19-20, 1978
Duration: Continuous; 2 days; Thursday-Friday; 11 total course hours
Fee: $75
Designed For: Specialists in Psychiatry
Credit: Category 1, AMA Physician's Recognition Award; 11 hours
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: Fred M. Taylor, MD, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund, Houston 77030

Radiology & Radioisotopes

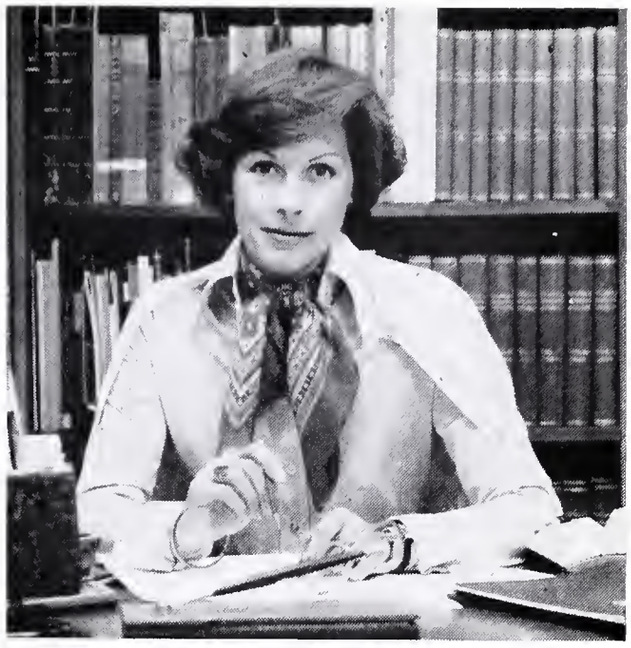
Title: External Beam, Interstitial, and Intracavitary Dosimetry—Principles
Sponsors: Division of Continuing Education, UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute
Location of Course: UT Health Science Center at Houston, 1100 Holcombe, Houston
Dates: Jan 3-14, 1978; July 3-14, 1978
Duration: Continuous; 10 days; 2 weeks; 8 hours instruction per day; Monday-Friday; 80 total course hours
Fee: $350
Designed For: Specialists in Radiotherapy; Physicists
Teaching Methods: Enrollee performs procedure, laboratory work, lecture
Contact: Sam A. Nixon, MD, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: External Beam, Interstitial, and Intracavitary Dosimetry—Manual and Computer Methods of Calculation
Sponsors: Division of Continuing Education, UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute
Location of Course: UT Health Science Center at Houston, 1100 Holcombe Blvd, Houston
Dates: Jan 16-27, 1978. July 17-28, 1978
Duration: Continuous; 10 days; 2 weeks; 8 hours instruction per day; Monday-Friday; 80 total course hours
Fee: $350
Designed For: Specialists in Radiotherapy; Physicists
Teaching Methods: Enrollee performs procedure, laboratory work, lecture
Contact: Sam A. Nixon, MD, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: Third Annual Course in Diagnostic Radiology for Practicing Radiologists
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio
Date: Jan 18-20, 1978
Duration: Continuous; 3 days; 7½ hours instruction per day; Wednesday-Friday; 8 am-5 pm. 20 total course hours
Fee: $165
Designed For: Specialists in Radiology
Enrollment: Minimum, 25
Credit: Category 1, AMA Physician's Recognition Award; American College of Radiology; 20 hours
Teaching Methods: Audiovisual materials, lecture
Contact: Barbara Woods, Coordinator, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: High Energy Electron, X-Ray, and Neutron Dosimetry
Sponsors: Division of Continuing Education, UT Health Science Center at Houston; UT System Cancer Center, M.D. Anderson Hospital and Tumor Institute
Location of Course: M.D. Anderson Hospital and Tumor Institute, 6723 Bertner, Houston
Date: Jan 30-Feb 4, 1978
Duration: Continuous; 6 days; 1 week; 10 hours instruction per day; Monday-Saturday; 60 total course hours
Fee: $250
Designed For: Physicists
Teaching Methods: Enrollee performs procedure, programmed instruction, lecture
Contact: Sam A. Nixon, MD, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

THIS SPACE PROVIDED BY THE PUBLISHER AS A PUBLIC SERVICE.



She's a graduate of Columbia with a Masters in literature.

She's a vice president of a publishing company.

She's watched television programs and read dozens of pamphlets and articles about early cancer detection.

She has relatives and close, personal friends who have had mastectomies.

She's about as aware of the need for breast self-examination as any intelligent woman could be.

Yet she does not get regular checkups nor does she even examine her own breasts.

Why? Because her doctor never told her to.

But 92% of the women who receive personal instruction from their doctors *do* regularly practice BSE.*
You don't have to be told how important early detection is. But maybe you need this reminder that a few personal words from you can often mean more than the millions of words that go into publicity and television programs.

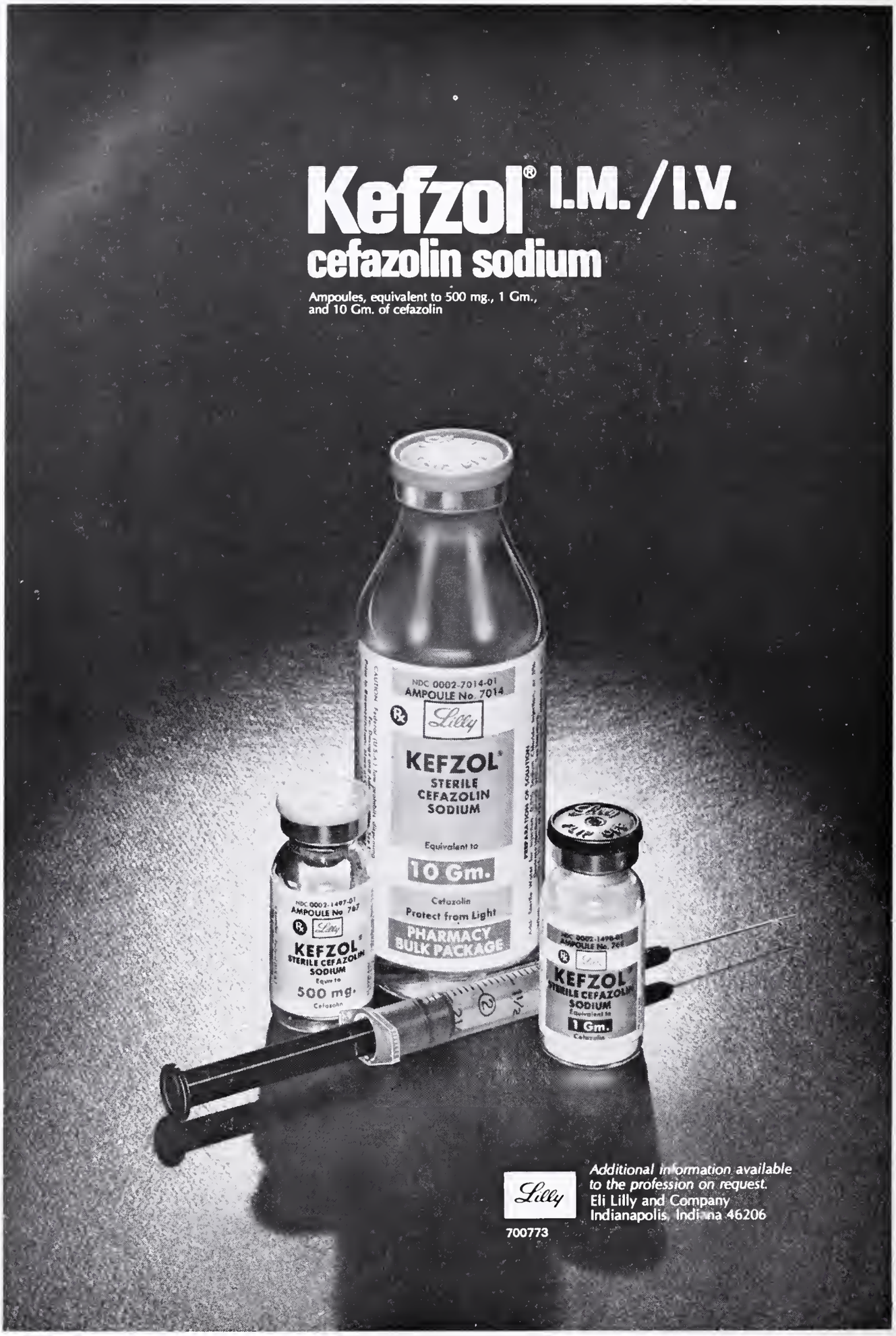
*Based on a Gallup study conducted for the American Cancer Society.

american cancer society®

Photo: Ray Solowinski

Kefzol® I.M./I.V.
cefazolin sodium

Ampoules, equivalent to 500 mg., 1 Gm.,
and 10 Gm. of cefazolin



Lilly

Additional information available to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206

700773

Noninvasive cardiovascular studies

Travis Winsor, MD; David Winsor, MD; Robert Smith

Noninvasive cardiovascular studies are finding wide acceptance because of the growing need for safe, comparatively inexpensive, cardiovascular studies which can be performed relatively quickly in the office or clinic.[1] Noninvasive cardiovascular studies of the heart, head, thorax, limbs, and extremities are emphasized in this article.

Cardiac Procedures

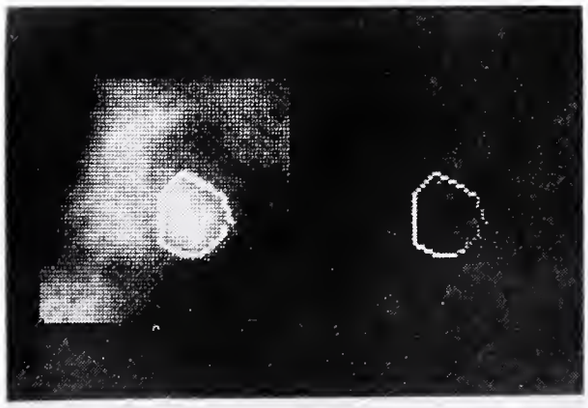
Certain noninvasive procedures for studying the heart are relatively well known. They include electrocardiography, the exercise tolerance test, the monitored electrocardiographic tracing, pacemaker checking, vectorcardiography, continuous Holter-type monitoring and cardiac sampling techniques over longer periods of time, ultrasound analysis, phonocardiography, systolic time intervals, apex or kinetocardiography, and simple roentgenography. Recently, exciting advances have been made in the field of nuclear cardiac imaging. The thallium scan, for example, shows areas of myocardial ischemia, and the multiple gated acquisition studies show cardiac filling and emptying and display heart wall motion, aortic flow, and make calculations such as the cardiac ejection fraction, rate of ventricular contractions, and other useful measurements[2] (Fig 1). This latter development has great promise and is useful for identifying cardiac disease and selecting patients for cardiac surgery. In our laboratory, we include the thallium and multiple gated acquisition studies before and after exercise as part of a complete cardiac evaluation. Cardiac catheterization will still be necessary for exact location of coronary artery obstruction when cardiac surgery is contemplated; however, the multiple gated acquisition studies will be useful in limiting the number of angiograms which will be necessary, and in following the postoperative course of patients with cardiac disease.

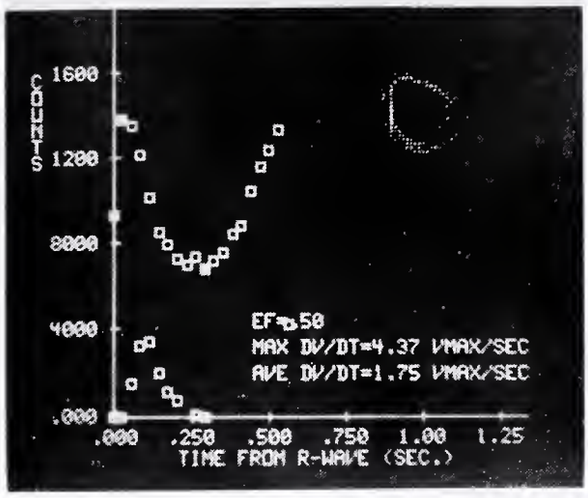
Noninvasive Procedures

Head: In laboratories designed for peripheral vascular procedures, the equipment may include some or all of that listed in Fig 2.[3-15]

Noninvasive examination of the head involves the studies and equipment listed in Fig 3. A typical thermographic pattern of a patient with partial internal and external carotid lesion on the right with involvement also of the innominate at its orifice is shown in Fig 4. The Spectrotherm thermograph was used, and white means "warm" and black means "cool." An analogue of the tracing is shown below the photograph of the head. In the upper picture, the analogue shows the temperature variations across the forehead where the line passes over it. The right side of the forehead is cooler than the left. Each step on the scale below the picture is 0.5° centigrade, or 2° centigrade from top to bottom. In the lower picture, the cut was taken across the eyeballs, and the right eyeball is cooler by 0.5° centigrade than the left. This is characteristic of an internal carotid artery lesion.

In our laboratory, the first step after the physical examination is the thermogram. Second, we obtain pulse propagation times from the electroencephalogram to the right and left sides of the forehead, together with the Doppler Sonagrams over the supraorbital or nasal arteries on the forehead, with and without temporal artery compression. Studies from a patient with a complete occlusion of the left internal carotid artery are shown in Fig 5. The time interval from the beginning of the R wave to the foot of the pulse wave at the forehead on the right





1. Top. A single frame from a multiple gated study: Left anterior oblique view. Left ventricular cavity outlined by the computer.
Bottom. Multiple gated study demonstrating the left ventricular volume curve. The end systolic and diastolic ventricular outlines are shown. The ejection fraction, maximum rate of contraction (DV/DT), and average DV/DT are calculated from the curve. DV = change in volume; DT = change in time.

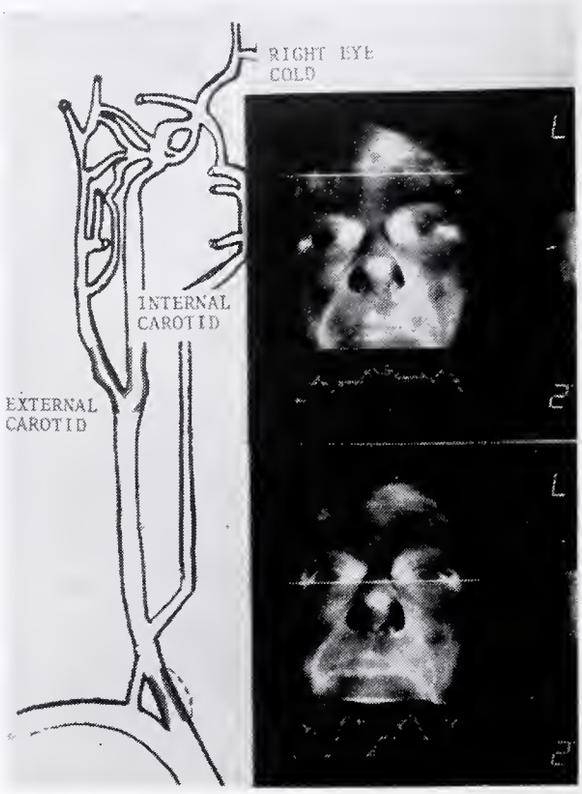
2. Equipment used in noninvasive vascular procedures.

1. Plethysmographs: volume calibrated pneumoplethysmograph (Winsor)
2. Thermograph
   - Spectrotherm
   - AGA
   - Barnes
3. Doppler
   - Parks
   - Medsonic
   - Sonicaid
4. Frequency analyzer (Kay)
5. Ocular plethysmograph
   - Kartchner
   - Gee
6. Pulsed Doppler
7. Impedance Plethysmograph (Wheeler)
8. Phleborheograph (Cranley)

1. Carotid phonogram
2. Thermogram
3. Doppler—Frontal arteries—frequency analysis
4. Ocular pressure and pulses
   - Ophthalmodynamometry
   - Gee OPG
   - Kartchner OPG
5. Pulse propagation time
6. Pulsed Doppler arteriogram
7. Frontal arterial pulses—carotid artery pressure
8. Ultrasound carotids

3. Equipment and procedures used for examination of the head.

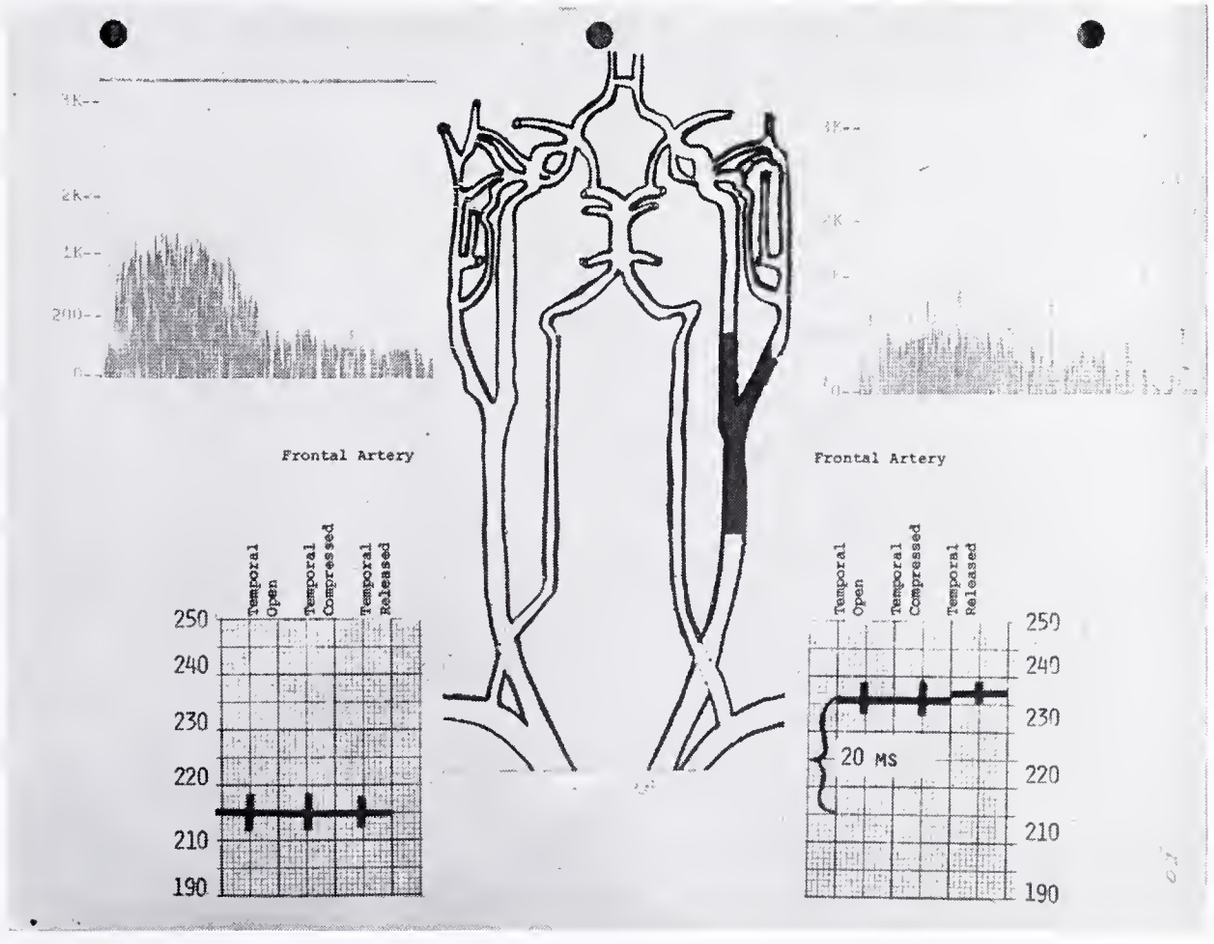
4. Stenosis of the right innominate, right internal, and right external carotid arteries shown angiographically. Cooling of the right eyeball is present.
Above: Forehead cut with analogue temperature record.
Below: Eyeball cut with analogue temperature record.



measured 215 msec, and on the left 235 msec, which is a difference of 20 msec between the two sides. Ordinarily, a difference of more than 7 msec between the two sides indicates disease. In the upper part of the picture the Doppler Sonagrams are seen. The Doppler frequency signals reached a peak of 20 Hz on the left, which is abnormal and is in contrast to the right side where the systolic frequencies reached a peak of 1K Hz. The configuration of the Doppler forms is abnormal bilaterally.

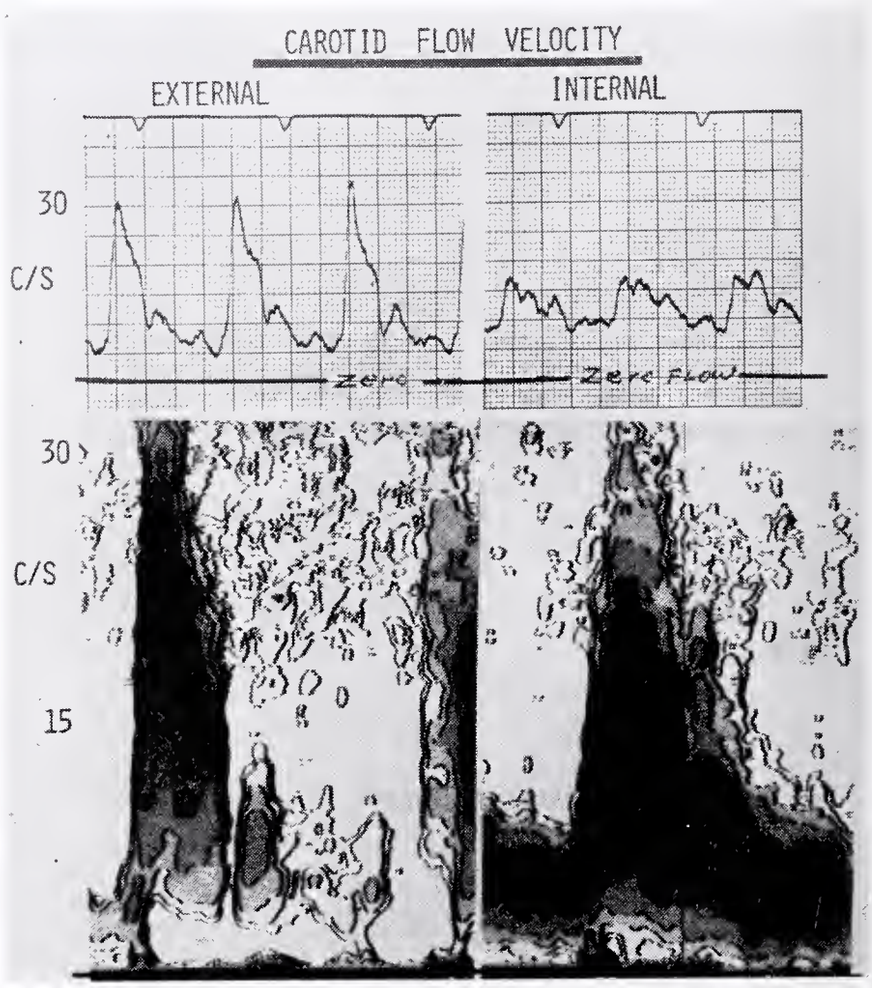
It is possible to separate the external and internal carotid artery and Doppler pulses by placing the Doppler probe in the mouth. This has been demonstrated clearly by Foley (New York). The external carotid artery pulse is characterized by a large phasic pulse wave with respect to a minimal flow velocity from 0 baseline from the base of the curve, and this is seen both in the analogue Doppler trace as well as the Kay Sonagram. Also, the fine configurations of phasic flow are seen in both records. The normal internal carotid pulse, however, has a slightly different configuration in which the phasic flow is considerably less, but the basic flow is greater. The probable reason

5. A patient with complete obstruction of left internal and external carotid arteries. Doppler studies from the supraorbital arteries show decreased frequencies (200 Hz) hence a decrease in flow velocity on the left. There is more normal velocity curve on the right (1K Hz). There is a delay of 20 msec of the arrival time of the heart pulse at the left forehead compared to the right.



for this is that the blood flowing in the internal carotid artery system is meeting a lower peripheral resistance internally as compared with the external carotid artery circulation (Fig 6).

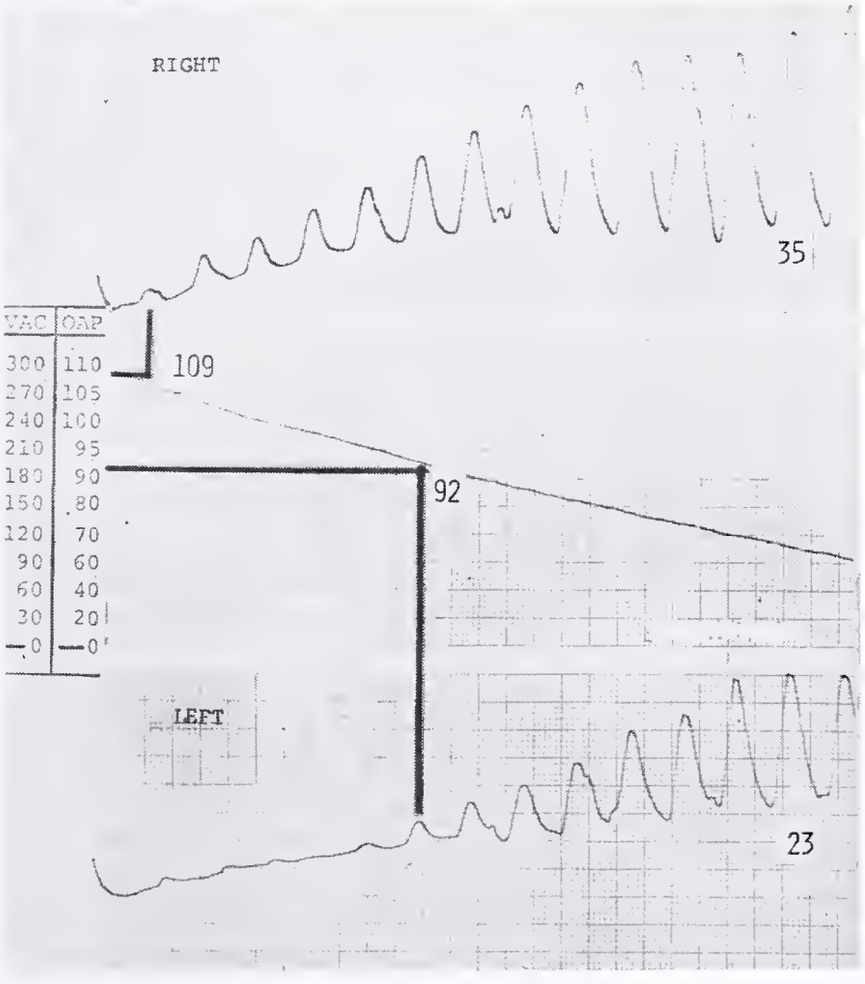
The Gee ophthalmic plethysmograph is used next and with this device suction cups are placed on the eyeball.[16] The suction on the eye is increased to 300 mm Hg. The suction is gradually released, as shown in the center trace of Fig 7. The pulsations from the right and left eyeballs are then recorded. The beginning of the pulsation in the patient demonstrated showed, on the right, a systolic blood pressure in the ophthalmic artery and internal carotid artery system of 109 mm Hg, and on the left side the systolic pressure was 92 mm Hg. Angiograms showed that this patient also had a complete occlusion of the left internal carotid artery, which was not accessible for surgery. The right eye showed a tall maximum pulse amplitude of 35 mm, and the left a smaller one of 23 mm. This is consistent with decreased circulation on the left side. This device is a volume-calibrated ocular plethysmograph, which is a highly desirable type of instrument. The Kartchner ophthalmic unit[10] measures mostly phase shifts or time differences between the foot or the crest of the wave, and is also useful.



6. A normal external and internal carotid study recorded through the mouth near the anterior pillar, showing the external carotid, a high resistance system, with large phasic flow and a small basic flow; the internal carotid system with low resistance is characterized by a low phasic flow and high basic flow.

Thorax: Studies in and around the thorax are confined primarily to studying the thoracic outlet.[17] This is important for determining the cause of painful arms and hands, and for selecting patients for appropriate surgery. The equipment and procedures used are shown in Fig 8. The studies mentioned in Fig 8 allow one to determine the volume pulses at the upper arm, to detect organic obstructions in the subclavian artery, and to carry out hyperabduction, scalenus anticus and other maneuvers. The phonocardiogram is essential for recording the murmur that comes and goes under the clavicle as the arms are moved. The Doppler blood flow measurements can be carried out at the wrist and radial artery with the arms in different positions to determine the effect of arm and head positions on peripheral circulation. The thermogram shows especially whether or not the hands are involved, such as from subclavian aneurysms with emboli to the fingers. The pulse propagation times to the hands are prolonged in the presence of an arterial obstruction, and are useful to know.

Limbs: The various equipment and procedures used in studying the peripheral arterial system are listed in Figs 9 and 10.[18-31] The plethysmograph helps to locate obstructions in the arterial system. The



7. A record from the Gee Ophthalmic Plethysmograph showing a systolic pressure of 109 on the right with a volume calibrated amplitude of 35 and on the left, a systolic pressure of 92, with a systolic amplitude of 23. This indicates obstruction of the left internal carotid system. A complete obstruction was present, angiographically.

Doppler device assists in determining pressure gradients; however, the pressure gradients can be performed well with plethysmographic techniques.[23-26] The thermogram shows a cool limb where ischemia is present. The ultrasonic[18] or pulsed angiogram permits noninvasive visualization of the aorta or femoral or carotid arteries. The calibrated electronic vibrometer helps determine the degree of peripheral neuropathy and allows for quantitative comparison of this measurement with treatment. A typical segmental pneumoplethysmographic study is shown in Fig 10. A microcomputerized version of this instrument has been developed.[28]

Peripheral vein studies are carried out with the equipment and procedures shown in Fig 11.[29-31] A typical display of a patient with thrombosis of two years' duration involving the right calf and right iliofemoral artery is shown in Fig 12. The thermogram was taken with the Barnes[7] instrument through a mirror, and therefore right and left are interchanged, but they are properly labeled in the pictures. There is increased heat in the calf as well as the groin area, which is consistent with findings on the venogram. Typical drainage curves were obtained, first elevating the legs and then lowering them with the heels ten inches above the bed. Detecting cuffs were at the ankles and congesting cuffs were above the knees. The cuffs were inflated until 3.0 cc of volume change took place under the detecting cuffs, at which time the congesting cuffs were released. The rate of drainage from the right (diseased leg) is considerably slower than from the left. The rate of drainage on the right was 1.9 cc/second compared with 2.5 cc/second on the left.

Extremities: Examination of the hands and feet is carried out with the instruments and procedures shown in Fig 13.[32-35] The digital plethysmograph makes it possible to determine the rate of inflow and outflow of blood through the radial and ulnar arteries, individually or jointly, using either a special technique in which venous occlusion is not required or using the venous occlusion technique. Also, the digital plethysmograph makes possible measurements of pulse forms and phase shifts and, together with the segmental plethysmograph, it can measure pressure drops from wrist to digit.

Thermograms are useful for the digits. A great deal of information about individual digits can be obtained quickly. The liquid crystal technique is also appropriate for the hands and feet.

Doppler pressure and flow velocity measurements with and without the Sonagram can give useful information about phasic and continuous backward flow.

The hands of a patient who punctured a finger are shown in Fig 14. There is decreased circulation in the left index finger (pictures taken through a mirror). In this

1. Volume calibrated plethysmograph
   - Hyperabduction maneuvers
   - Scalenus anticus maneuvers
   - Pulse forms
2. Phonogram—Subclavian arteries
3. Doppler blood pressure at wrists
4. Thermogram
5. Pulse propagation time (ECG to arms and forehead)

8. Equipment and procedures used for examining the thoracic outlet.

9. Equipment used for examining the peripheral arterial circulation.

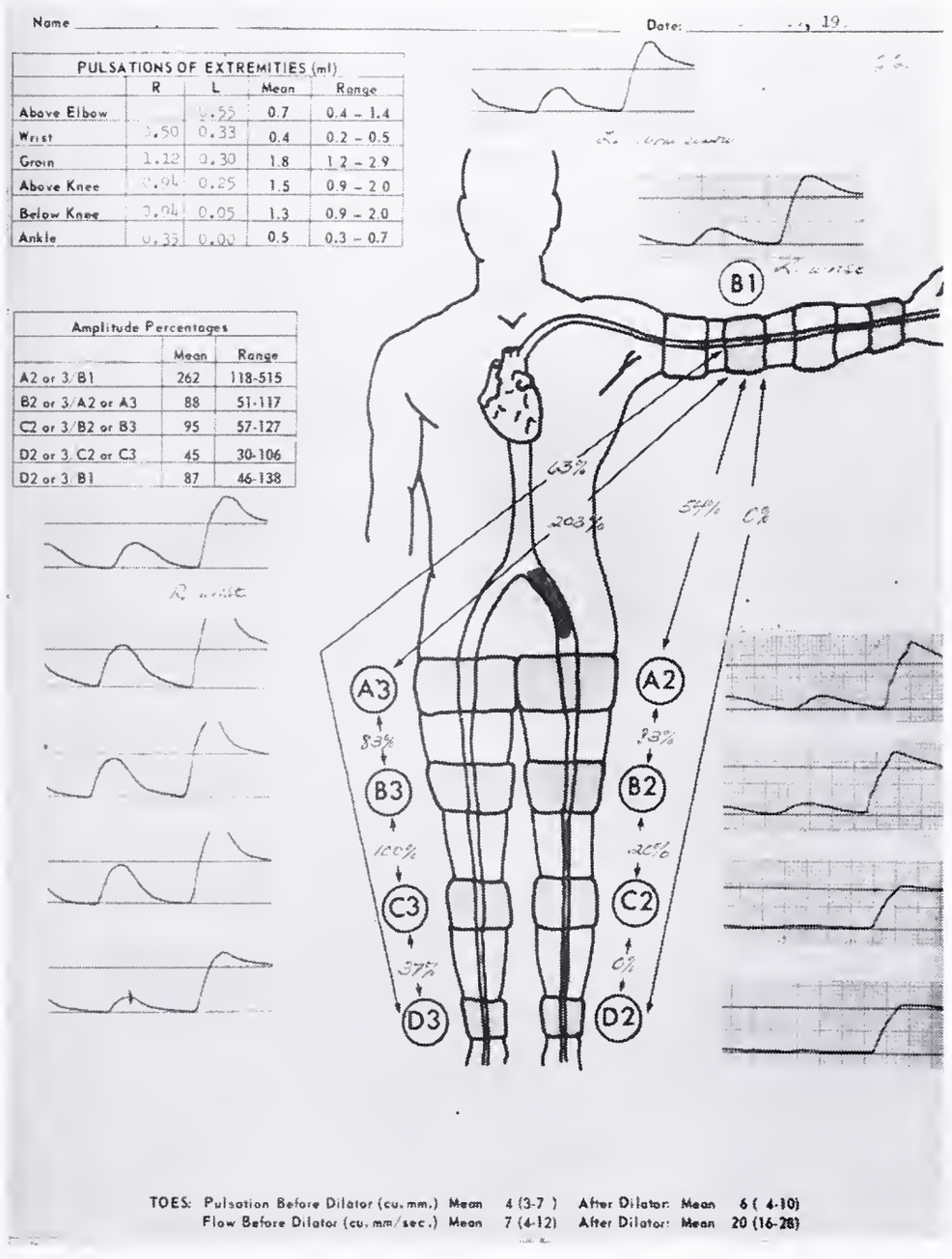
1. Pneumoplethysmograph (Winsor); or impedance (Allison)
2. Doppler pressure gradients (Winsor) and wave form studies with Sonagram or recording
3. Thermogram
4. Ultrasonic angiogram or pulsed Doppler
5. Calibrated electronic vibrometer

picture, white is warm and black is cool. The coolness at the base of the left thumb suggests, in addition to the digital trauma, vascular insufficiency of the hand. Use of other techniques proved this to be true.

10. Typical segmental pneumoplethysmographic study with volume calibrations, indicating complete obstruction in the left iliofemoral artery with poor run-off.

1. Pneumoplethysmograph (Winsor)—drainage, dependency, compression
2. Thermogram
3. Impedance plethysmograph (Wheeler)
4. Phleborheograph (Cranley)

11. Equipment employed for examining the peripheral venous system.



Discussion

We have demonstrated the role of noninvasive procedures in the examination of the heart, head, thorax, limbs, and hands and feet. These techniques allow one to approach circulation problems in dynamic terms, and make possible physical measurements similar to those that a physicist might make on a flexible hydraulic system. The various functions that are studied in our laboratory are shown in Fig 15. Noninvasive cardiovascular techniques are useful adjuncts to measuring the dynamic aspects of the peripheral circulation, and most of these studies can be carried out in the doctor's office or in a well-equipped clinic or laboratory. Such laboratory services save time for patients, and may reduce the need for invasive procedures with the attendant complications and high hospital costs.

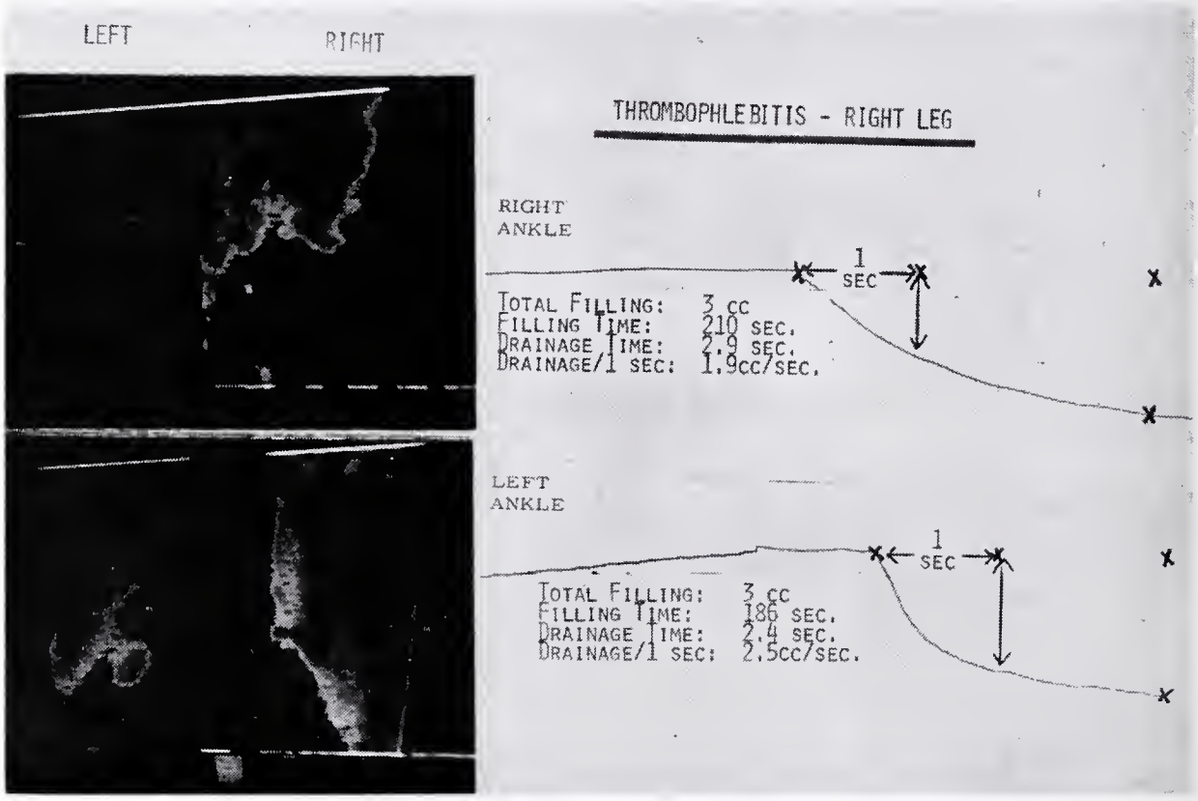
Summary

The noninvasive cardiovascular techniques can supply dynamic information which cannot be supplied by many static techniques, such as some phases of angiography. Noninvasive techniques permit the study of the circulation over rather prolonged periods of time, giving much information about the hemodynamic and functional aspects of the cardiovascular system.

References

1. Gasper MR: Discussion. Fronek A, Johansen KH, Dilley RB, et al: Noninvasive physiologic tests in the diagnosis and characterization of peripheral arterial occlusive disease. Am J Surg 126:205-214, 1973.

12. Venous drainage curves carried out with the segmental pneumoplethysmograph. There is a decreased rate of drainage on the right (diseased) side. Venograms showed deep vein obstruction of the right calf and iliofemoral veins up to the common femoral area. Thermograms show, on the right leg, increased heat in both the calf and groin areas.



2. Winsor DW: Radionuclide determination of cardiac function with a nitrate drug. Unpublished data.

3. Winsor T: Clinical plethysmography, Part I: An improved direct writing plethysmograph. Angiology 4:134-148, 1963.

4. Winsor T: The segmental plethysmograph. A description of the instrument. Angiology 8:87-101, 1957.

5. Winsor T: Clinical plethysmography, Part II: Plethysmographic procedures of clinical importance. Angiology 4:149-164, 1963.

6. Winsor T: A sensitive direct-writing plethysmograph. Elec Eng 72:619-623, 1953.

7. Barnes RB: Thermography of the human body. Science 140:870-877, 1963.

8. Strandness DE Jr, McCutcheon EP, Rushmer RF: Application of a transcutaneous Doppler flowmeter in evaluation of occlusive arterial disease. Surg Gynecol Obstet 122:1039-1045, 1966.

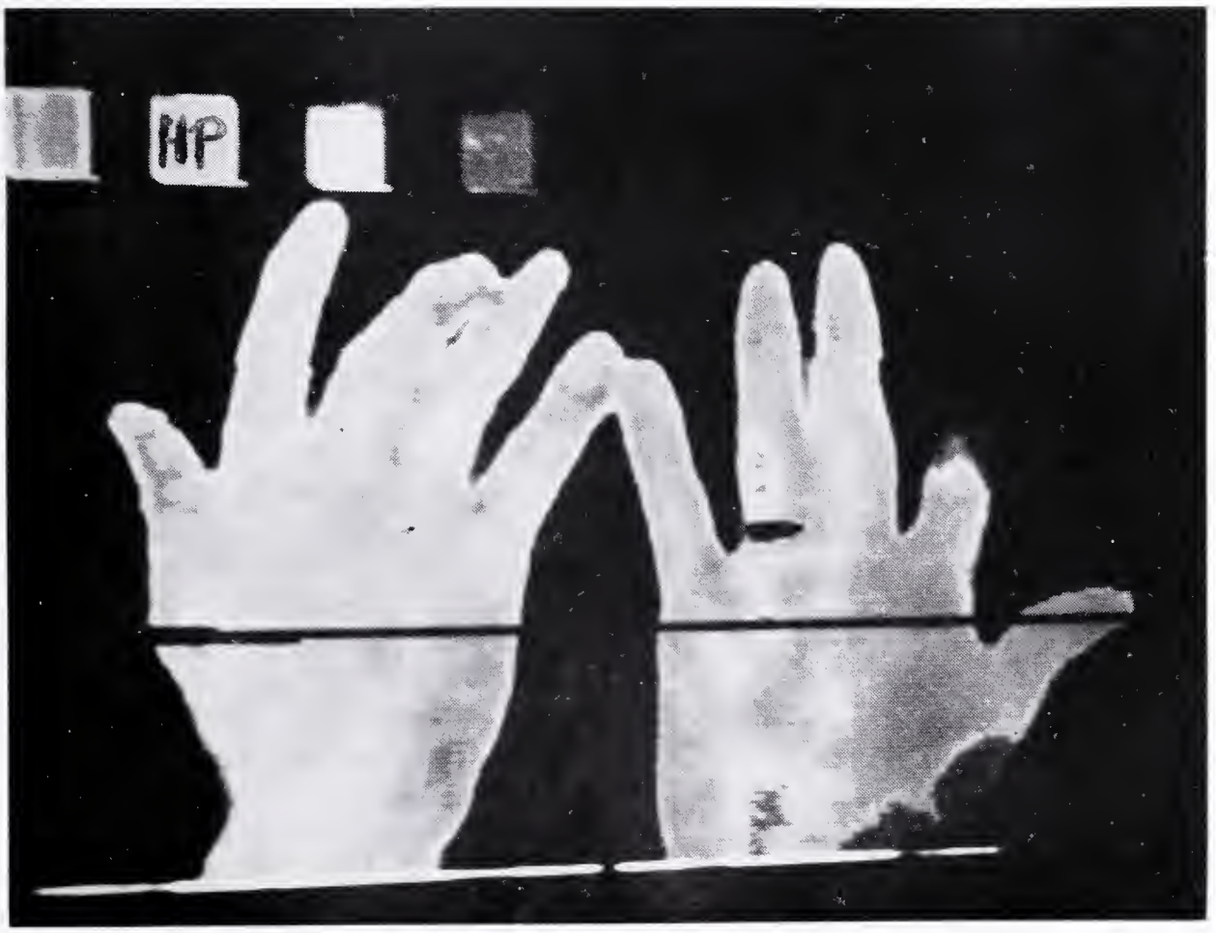
9. Siegel B, Gibson RJ, Amatneek KV, et al; A Doppler ultrasound method for distinguishing laminal from turbulent flow. A preliminary report. J Surg Res 10:221-224, 1970.

10. Kartchner MM, McRae LP, Morrison FD: Nonin-

1. Segmental pneumoplethysmograph
2. Digital plethysmograph
   - Pulse form analysis
   - Blood flow—inflow and outflow
   - Fractional circulation
   - Wrist to digit pressure drop
3. Thermograms
   - Liquid crystals
4. Doppler pressures and Sonagram

13. Equipment used for examining the hands and feet.

14. The hand of a patient with trauma to the left index finger. The index finger is cool, indicating local trauma; however the coolness at the base of the thumb indicates decreased arterial circulation due to disease of the hand, which was established with other methods.



vasive detection and evaluation of carotid occlusive disease. Arch Surg 106:528-535, 1973.

11. Mozersky DJ, Hokanson DE, Sumner DS, et al: Ultrasonic visualization of the arterial lumen. Surgery 72:253-259, 1972.

12. Wheeler HB, O'Donnell JA, Anderson FA Jr, et al: Occlusive impedance phlebography: a diagnostic procedure for venous thrombosis and pulmonary embolism. Prog Cardiovasc Dis 17(3):199-205, 1974.

13. Cranley JJ, Gay AY, Grass AM, et al: A plethysmographic technique for the diagnosis of deep venous thrombosis of the lower extremities. Surg Gynecol Obstet 136:385-394, 1973.

14. Carney AL, Anderson EM: Collateral ophthalmic artery (COAP) and the collateral ocular pulse (COPG): A quantitative technique to assess carotid and vertebral artery blood flow. Departments of thoracic and cardiovascular surgery, University of Illinois. Presented at the International Cardiovascular Congress I, Scottsdale, Ariz, March, 1977.

15. Chase, D: Personal communication.

16. Gee W, Smith CA, Hinson CE, et al: Ocular pneumoplethysmography in carotid artery disease. Med Instrum 8:244-248, 1974.

17. Winsor T, Brow R: Costoclavicular syndrome. Its diagnosis and treatment. JAMA 196:697-699, 1966.

18. Fronek A, Johansen K, Dilley RB, et al: Ultrasonographically monitored postocclusive reactive hyperemia in the diagnosis of peripheral arterial occlusive disease. Circulation 48:149-152, 1973.

1. Systolic pressure
2. Diastolic pressure
3. Pressure drops between points
4. Velocity in cm/sec (time intervals in milliseconds)
5. Volume flow cc/100 cc/min or cu ml/4 cc/sec
6. Volume rate of inflow
7. Volume rate of outflow
8. Mean volume flow
9. Temperature
10. Frequencies
11. Sound
12. Frequency components of sound
13. Temperature patterns
14. Anatomy of blood vessels
15. Phase shift
16. Pulse form configurations
17. Impedance
18. Pressure and flow
19. Peripheral resistance
20. Inductance
21. Capacitance
22. Volume
23. Capacity
24. Distensibility
25. Vascular wall motion
26. Isotope flow
27. Isotope clearance

15. Noninvasive physical and physiologic hemodynamic studies.

19. Mozersky DJ, Kohanson DE, Baker DW, et al: Ultrasonic arteriography. Arch Surg 103:663-667, 1971.

20. Gosling RG, Dunbar G, King DH, et al: The quantitative analysis of occlusive peripheral arterial disease by a non-intrusive ultrasonic technique. Angiology 22:52-55, 1971.

21. Edwards EA, Cohen NR, Kaplan MM: Effect of exercise on the peripheral pulses. N Engl J Med 260: 738-741, 1961.

22. Lassen NA, Lindberg J, Munck O: Measurements of blood-flow through skeletal muscle by intramuscular injection of Xenon-133. Lancet 1:686-689, 1964.

23. Winsor T: Influence of arterial disease on the systolic blood pressure gradients of the extremity. Am J Med Sci 220:117-126, 1950.

24. Yao ST, Hobbs JT, Irvine WT: Ankle systolic pressure measurements in arterial disease affecting the lower extremities. Br J Surg 56:676, 1969.

25. Yao ST: Haemodynamic studies in peripheral arterial disease. Br J Surg 57:761-766, 1970.

26. Johnston KW, Kakkar VV: Noninvasive measurement of systolic blood pressure slope: a reliable index of the presence of peripheral arterial occlusive disease. Arch Surg 108:52-56, 1974.

27. Bernstein EF, Dilley RB, Johansen KH: Noninvasive physiologic tests in the diagnosis of characterization of peripheral arterial occlusive disease. Am J Surg 126:205-214, 1973.

28. Winsor T, Smith CA, Hinson CE, et al: The computerized plethysmograph. Unpublished data.

29. Winsor T, Hyman C: Objective venous studies: (insufficiency, obstruction and inflammation). J Cardiovasc Surg 2:146-152, 1961.

30. Winsor T: Lehrbuch und Atlas der Angiologie. Editor, Arnold Kappert. Contributor to Verlag Hans Huber, Publisher. Bern, Switzerland, 1969.

31. Ludbrook J: The analysis of the venous system. Bern, Switzerland, Hans Huber, 1972.

32. Winsor T, Karpman HL: The morphology of normal and abnormal pulse waves as recorded plethysmographically. Cardiology 511-516, 1959.

33. Hyman C, Winsor T: What can be found in arterial pulse waves. Am Heart J 61:424-426, 1961.

34. Winsor T, Hyman C: A primer of peripheral vascular diseases. Philadelphia, Lea and Febiger, 1965.

35. Simmons EM, Leader H, Friedman SA, et al: A computer program for the peripheral pulse wave. Am J Cardiol 19:827-831, 1967.

Travis Winsor, MD, Clinical Professor of Medicine; David Winsor, MD, Clinical Instructor in Medicine, University of Southern California School of Medicine.

Robert Smith, Fellow, Memorial Heart Research Foundation.

Reprint requests to 4041 Wilshire Blvd, Los Angeles, CA 90010.

Use of low-dose heparin in pelvic surgery

Richard P. Marrs, MD; Robert E. Girtanner, MD

A life-threatening complication of routine pelvic surgery is postoperative pulmonary embolism. The use of heparin in low doses has been studied as a means to decrease not only the incidence of pulmonary embolism, but also the mortality if embolism occurs. It is evident that the use of low doses of heparin in high-risk patients as well as patients having routine pelvic surgery will significantly decrease the risk of deep-vein thrombosis and pulmonary embolism.

Of all the complications of pelvic surgery, one of the most sinister hazards is that of venous thrombosis and pulmonary embolism. Pulmonary embolism occurs in 1% of all pelvic operations and is the major cause of death following hysterectomy.[14] The fact that more than 60-75% of the pulmonary emboli occur without previous symptoms or clinical signs of venous thrombosis emphasizes the importance of preventing this potentially fatal complication and the need for full understanding of the pathophysiology of this vascular problem. Pulmonary embolism can be prevented if the susceptible patient can be identified.[10]

The most disturbing feature of this disease is the silent nature of the thrombotic process which results in either partial or complete vein occlusion. Postoperatively, Flanc and associates[4] studied patients who had abdominal as well as pelvic operations, by using fibrinogen labeled with iodine 125. They identified silent venous thrombosis in approximately 35% of all cases. Of the cases of lower extremity venous thrombosis, 50% occurred during the surgical procedure. In this study, only one out of two patients with postoperative venous thrombosis demonstrated any clinical signs. The common clinical signs—Homan's sign, leg edema, localized pain—are late clinical signs of venous thrombosis and are not of benefit in the early diagnosis of venous thrombosis. Likewise, one third of the patients with positive clinical diagnoses had normal findings on contrast venography.

In searching for a cause for postoperative venous thrombosis, one needs to evaluate biochemical changes seen during operation or postoperatively. First, there is an increase in some of the intrinsic coagulation factors, specifically factors VIII, IX, and X. There is also an increase in circulating platelets and an increase in platelet adhesiveness and fibrinogen within 72-96 hours following surgery.[1,2] Also, there is an increase in the circulating fibrinolysin inhibitors. One of the biological effects of surgery is tissue necrosis which releases a thromboplastic substance. This extrinsic factor accelerates the clotting mechanism. Surgery on the female reproductive tract generates trauma to the pelvic venous plexus. Occasionally, when severe pelvic infections involve the operative site, the adjacent pelvic veins are involved, resulting in septic thrombophlebitis. More commonly, major trauma occurs to the pelvic vessels during radical pelvic surgery, and these patients are at a higher risk than are patients with benign pelvic disease. All in all, this vascular trauma is one recognized factor in initiating venous thrombosis.[10]

When discussing factors predisposing to venous thrombosis, venous stasis is of primary importance. Stasis in the lower extremities results in platelet aggregation and platelet adhesiveness to the vein wall with the release of thromboplastin-like substances which form aggregates of platelets, fibrin, and red cells which result in thrombus formation. Doren's group[3] and others have shown that the rate of venous

return from the lower extremities falls to 50% of normal during the operative procedure. The blood flow in the lower extremities undergoes a 75% reduction postoperatively which persists from 4 to 14 days because of the loss of pump action of the muscles of the lower extremities.[10] Other factors predisposing to venous stasis include tight abdominal packing with obstruction of the underlying vena cava, extensive use of muscle relaxants, and prolonged anesthesia during surgical treatment of disease.

There are several factors which place a patient at high risk for venous thrombosis and pulmonary embolism. Age is important in increasing a person's risk for venous thrombosis. Sevitt and Gallagher showed that the greatest incidence of deep vein thrombosis in patients dying from burns, trauma, or surgery occurs in patients who are in the seventh to eighth decade.[12] Other studies have shown that fatal emboli occur increasingly with increasing age. Another risk factor is obesity.[10] The third factor is immobility. This is a major cause of impairment of venous circulation in the lower extremities. Flanc and Kemble[9] used fibrinogen ^{125}I scanning before and immediately following surgery. Their evidence showed that venous thrombosis did occur during the operative period. Postoperative immobility continues to make the risk of thromboembolic disease secondary to venous stasis high. Anatomic positions such as sitting with legs crossed, legs dangling from the bedside, and exaggerated Fowler's position all cause decreased venous return from the lower extremities. High-risk patients should be aggressively encouraged to walk early in the postoperative period, and the foot of the bed always should be elevated approximately 15°. There are many additional factors—varicose veins, cardiac disease with congestive heart failure, chronic pulmonary disease, severe diabetes mellitus, malignancy, and infectious processes—which place a patient at risk for thromboembolic disease.

After identifying a high-risk patient, a simple method of prevention of thromboembolic disease is desirable. With the evidence that more than half of the venous thrombosis occurs during the operative procedure itself, treatment must begin before surgery. Although various chemical and mechanical means have been used, one method of decreasing the rate of postoperative venous thrombosis is the prophylactic use of heparin in low doses. In separate controlled studies, Kakkar[8] and coworkers and Gordon-Smith and associates[6] concluded that the most effective regimen was 5,000 USP units of heparin given subcutaneously two hours before surgery and every 12 hours thereafter for the subsequent five postoperative days. Patients over 40 years of age and undergoing major abdominal operations, prostatectomy, nephrectomy, or radical mastectomy were included in the study. Deep-vein thrombosis was reduced from 26% in the control group to 4% in the test group (Kakkar)[8] and 42% in the control group to 8.3% in the test group (Gordon-Smith) respectively.[6] Fibrinogen ^{125}I scanning was used to detect thrombosis in both groups, and results were confirmed by contrast venography.

Kakkar[7] is now conducting studies in several European centers, using the same low-dose heparin regimen. To date, 4,125 patients of whom 2,076 were controls and 2,045 were treated with heparin, have undergone major surgery. Among the untreated patients there have been 100 deaths, 16 of which were ascribed to massive pulmonary embolism, or a mortality of 16% secondary to pulmonary embolism. In the heparin-treated group there have been 80

deaths, 2 of which were ascribed to pulmonary embolism, for a mortality of 2.5% secondary to pulmonary embolism. Fibrinogen ^{125}I scanning has been performed in 1,292 patients to detect deep-vein thrombosis; 667 were in the control group and 625 were in the heparin-treated group. The frequency of deep vein thrombosis was 24.6% in the control group and 7.7% in the heparin-treated group. Moreover, 24 patients in the control group and 8 patients in the heparin-treated group were treated for clinically suspected pulmonary embolism. There was no statistical difference in the operative and postoperative blood loss in the two groups.[7]

Furthermore, in a study by Gordon-Smith,[6] different methods of delivery of heparin were investigated. One group of patients received only three 5,000-unit doses of heparin, subcutaneously, one preoperatively and two postoperatively, and patients in the second group received the preoperative dose and were maintained on heparin postoperatively for five days. There was a 42% incidence of deep-vein thrombosis in the matched control group, a 13.5% incidence in the group receiving only three doses of heparin, and an 8.3% incidence of deep-vein thrombosis in the group that received the full low dose course.

In patients with malignant disease, there was an incidence of 53% of deep-vein thrombosis in the control group as found by fibrinogen ^{125}I scanning. In the group receiving three doses of heparin, there was a 26.3% incidence of deep-vein thrombosis. In the group receiving the full low-dose course, there was a 6.7% incidence of deep-vein thrombosis.[6]

Not only is the timing and duration of heparin therapy important, but also the type of heparin used is important in the low-dose regimen. In separate studies done by Novak[11] and Goldberg,[5] it was shown that the anticoagulant effects of pork-gut heparin are different from those of beef-lung heparin. In Goldberg's study[5] there was a high rate of thrombosis before the use of beef-lung heparin, and then when pork-gut heparin was inadvertently used again in the same study, an increased incidence of thrombosis was again encountered. Moreover, it has been chemically proven that 1 mg of protamine will inactivate only 90 USP units of beef-lung heparin, whereas 1 mg of protamine will neutralize 115 USP units of pork-gut heparin. Novak's study[11] bore out the difference in protamine titer and further demonstrated that beef-lung heparin showed slower platelet aggregation and faster thrombolysis than pork-gut heparin. Therefore, when using low-dose heparin treatment, it is extremely important to use beef-lung heparin. If beef-lung heparin is not available, or if the added expense of beef-lung heparin is not desired, pork-gut heparin can be substituted. If pork-gut heparin is used the dose should be moved up to 6,000 to 7,000 USP units 2 to 12 hours before surgery, and then every 12 hours thereafter until the patient is fully ambulatory. This allows for the difference in the protamine titer, and for the other factors found in the two types of heparin.

From 1970 through 1975 there were 100 surgical procedures for pelvic (cervical or vulvar) malignancy performed at The University of Texas Medical Branch in Galveston. In 54 cases, the low-dose heparin regimen was not used; pulmonary embolism developed in two of the 54 cases, and one of those two patients died as a result of the pulmonary embolism. Since the use of low-dose heparin has become routine on the Oncology Service at The University of Texas Medical Branch, Galveston, 86 cases (46 radical, 40 staging laparotomies) have

been performed. There has been no thromboembolic disease. Of further interest is that the Oncology Service at the University of Miami has reported (in a letter in 1976 from H. E. Averette, director of the gynecology oncology division), on 268 staging laparotomies including 146 radical hysterectomies and 4 primary exenterations, all using low-dose heparin, and no patients had complications secondary to pulmonary embolism.

Summary

The most dangerous postoperative complication in gynecologic surgery is pulmonary embolism. We have reviewed many studies of low-dose heparin treatment for routine gynecological surgery. The use of low-dose heparin decreases the incidence of deep-vein thrombosis, and also decreases the incidence of postoperative pulmonary embolus to a statistically significant degree. The routine use of 5,000 USP units of heparin, subcutaneously, 12 hours before surgery and then every 12 hours postoperatively for five days or until full ambulation is accomplished, has had no deleterious effects during or after the surgery, as reported in 1975 in a letter from J. P. Thomson, Austin, Tex, who has been using low dose heparin therapy routinely in his private gynecology practice for the past three years. Venous thrombosis and pulmonary embolus are preventable problems; therapy must be started preoperatively and maintained throughout the postoperative phase. Low-dose heparin therapy could be the answer to a serious problem in gynecologic surgery.

References

1. Atik M, Harkness JW, Wichmann H: Prevention of fatal pulmonary embolism. Surg Gynec Obstet 130:403-413.

2. Atik M, Hanson B, Isla F, et al: Pulmonary embolism, a preventable complication. Am Surg 34:888-894, 1968.

3. Doran FS, Drury M, Sivyer A: A simple way to combat venous stasis which occurs in the lower limbs during surgical operations. Br J Surg 51:486-492, 1964.

4. Flanc C, Kakkar VV, Clarke MB: The detection of venous thrombosis of the legs using 125-I-labeled fibrinogen. Br J Surg 55:742-747, 1968.

5. Goldberg E, O'Reilly M, Chaithiraphan S: Prevention of post-branchial-arteriotomy thrombosis. Lancet 1:789, 1972.

6. Gordon-Smith IC, Grundy DP, LeQuesne LP, et al: Controlled trial of two regimens of subcutaneous heparin in the prevention of postoperative deep-vein thrombosis. Lancet 1:1133-1135, 1972.

7. Kakkar VV, Corrigan TP, Fossard DP: Prevention of fatal postoperative pulmonary embolism by low doses of heparin. Lancet, 12 July, 45-51, 1975.

8. Kakkar VV: Medical treatment of deep vein thrombosis. Br J Hosp Med 6:741-764, 1971.

9. Kemble JV: Incidence of deep vein thrombosis. Br J Hosp Med 6:721-726, 1971.

10. Mattingly RF, Wilkinson EJ: Thromboembolism in pelvic surgery. Clin Obstet Gynecol 16(2):162-194, 1973.

11. Novak: A comparative study of the effect of lung and gut heparins on platelet aggregation and protamine neutralization in man. Clin Med 9:22-27, 1972.

12. Sevitt S, Gallagher NG: Prevention of venous thrombosis and pulmonary embolism in injured patients. A trial of anticoagulant prophylaxis with phenindione in middle-aged and elderly patients with fractured necks of femur. Lancet 2:981-989, 1959.

13. Sharnoff JG, DeBlasio G: Prevention of fatal postoperative thromboembolism by heparin prophylaxis. Lancet 2:1006-1007, 1970.

14. Jeffcoate TNA, Tindall VR: Venous thrombosis and embolism in obstetrics and gynecology. Aust NZ J Obstet Gynecol 5:119, 1965.

Richard P. Marrs, MD, Department of Endocrinology and Infertility, LAC/USC Medical Center, 1240 N. Mission Rd, Los Angeles, CA 90033.

Robert E. Girtanner, MD, The University of Texas Medical Branch, Galveston, TX 77550.

Flexibility is our forte: The Brown Schools

Because we maintain great flexibility at all three of our treatment centers, each resident follows an individualized plan of treatment, training, education and care prescribed for that resident alone.

And we believe that residential treatment conducted in this highly individualized manner still is the most effective treatment for many. Our large, experienced staff is skilled in the treatment of children, adolescents and adults with learning disabilities, neurological impairment, mental retardation or emotional disturbance.

Our three treatment centers are geographically separated to provide the appropriate residential milieu, yet close enough that residents benefit from the comprehensive training and expertise of the entire staff. All three are psychiatrically oriented, so that we are prepared to treat emotional disturbance in persons of any intellectual capacity and of any age.

For information, write: Director of Admissions / Department K-1
THE BROWN SCHOOLS / P.O. Box 4008, Austin, Texas 78765
From Texas Free: (800) 292-5404

All our programs are accredited by the appropriate councils of the Joint Commission on Accreditation of Hospitals.

THE BROWN SCHOOLS

An equal opportunity employer.

Nuclear Diagnostics

OFFERING SPECIALIZED REFERENCE SERVICE FOR RADIOASSAY PROCEDURES

AUSTRALIAN ANTIGEN
CEA
CHORIONIC GONADOTROPIN-B SUBUNIT
CORTISOL
CORTISOL, URINARY
DEHYDROEPIANDROSTERONE
DIGOXIN
DILANTIN
ESTRADIOL
ESTRIOL, TOTAL
ESTRIOL, UNCONJUGATED
ESTROGEN RECEPTORS
ESTRONE
FERRITIN
FOLATE
FOLATE, RBC
FOLLICLE STIMULATING HORMONE
GASTRIN
GROWTH HORMONE
HCG RADIORECEPTOR PREGNANCY TEST
INSULIN
LUTEINIZING HORMONE
PLACENTAL LACTOGEN
PROLACTIN
PROGESTERONE
RENIN
TESTOSTERONE
T3 UPTAKE
T3 RIA
T4 RIA
THYROXINE, FREE
TSH
VITAMIN B-12

NUCLEAR DIAGNOSTICS
SUITE 110
7711 LOUIS PASTEUR DRIVE
SAN ANTONIO, TEXAS 78229
TELEPHONE (512) 690-8792

Randall C. Harper, M.D., FASCP
Elmore M. Averyt, M.D., FCAP
Ruskin C. Norman, M.D., FACR
Harold M. Brannan, M.D., ABNM, MACR
Fred W. Riley, Jr., M.D., ABNM, MACR
B. Mac Works, M.D., MACR
James R. Stewart, M.D., MACR
John E. Freeman, M.D., MRCP, FRCP
Joseph P. Miller, M.D., MACR

MEDICAL MANAGEMENT CONSULTANTS

Providing the following services to the health care field:

1. Medical practice business management:
   a) Start-ups
   b) Ongoing
   c) Consulting
2. Leasing-Auto's and equipment (physicians only)
3. Investment and insurance counseling
4. Pension and profit sharing, consulting

PROFESSIONAL SYSTEMS & SERVICES, INC.

800 8th Avenue, Suite 404
Fort Worth, Texas 76104
817 332-2093

1701 Cedar Springs
Dallas, Texas 75202
214 742-2358

Subscriptions Available to

Printed Protocols for

MEDICAL GRAND ROUNDS

(Parkland Memorial Hospital)

University of Texas Health Science Center at Dallas
Southwestern Medical School

Cost: $120 per year, covering 40-45 protocols, mailed weekly

Send check payable to **UT Health Science Center at Dallas** and your mailing address to:

Medical Grand Rounds (T)
Dept. of Internal Medicine, UTHSCD
5323 Harry Hines Boulevard
Dallas, TX 75235

★

Specialized Service

IN

PROFESSIONAL LIABILITY INSURANCE

is a high mark of distinction

THE

MEDICAL PROTECTIVE COMPANY

FORT WAYNE, INDIANA

TEXAS REPRESENTATIVES

A. F. Ennis, Jr. and B. C. Crim, Suite 210, 712 N. Washington, Dallas 75246	Telephone (214) 821-4640
W. L. Kirk, 1508 Hermann Prof. Bldg., Houston 77030	Telephone (713) 797-9835
M. C. Rollins, 408 GPM Bldg., South Tower, San Antonio 78216	Telephone (512) 344-5901

Bank Financing for Physicians

We specialize in equipment leasing and financing, unsecured loans and lines of credit to Physicians And we handle it all by mail.

Unsecured loans with optional dollar amounts (to $10,000), optional payment schedules. Equipment leasing to give you tax advantages, restore operating capital, convert unused depreciation to cash. And lines of credit to provide for future cash needs.

We charge tax deductible bank rates. You won't spend any of your valuable time at your bank, and you'll reserve your regular bank credit for times when you really need it.

For further information, complete and mail this coupon today. I want to know more about:

— Unsecured Loans — Sale & Lease Back Plans
— A Line of Credit — Lease-Purchase Plans
— Equipment Leasing — Equipment Financing
— Other: _____

Dr. _____ Phone _____
Address _____
City _____ State ____ Zip _____

Professional Services Division
TEXAS BANK AND TRUST COMPANY
P. O. Box 101 Jacksonville, Texas 75766

41st Annual New Orleans Graduate Medical Assembly

March 31-April 4, 1978

Meeting Theme:

"The High Risk Patient"

Accreditation: AMA-Category I
AAFP, ACEP
Adolph A. Flores, Jr., M.D., President
Oliver H. Dabezies, Jr., M.D., F.A.C.S., Director of Program

Fees: Non-Member Physicians - $200
Military - $100
Registered Nurses - $100
Students, Residents, Interns & Fellows - Complimentary

Write or Phone: New Orleans Graduate Medical Assembly
Tulane Medical Center, Room 1538
1430 Tulane Avenue
New Orleans, Louisiana 70112
(504) 525-9930

Early registration and hotel reservations suggested.

When pain complicates acute cystitis*

Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl

for the pain for the pathogens

□ **Early relief of painful symptoms** such as burning and pain associated with urgency and frequency.

□ **Effective control of susceptible pathogens** such as *E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris.*

□ **Appropriate antibacterial therapy:** up to three days therapy with Azo Gantanol, then 11 days with Gantanol® (sulfamethoxazole), 0.5 Gm tablets.

*Nonobstructed; due to susceptible organisms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies.

***Note:* Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

Warnings: Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *G.I. reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Azo Gantanol is intended for the acute, painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

Note: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine.

Supplied: Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F Co.) and 25 mg. of hydrochlorothiazide.

MAKES SENSE

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* Warning
This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** When the combination represents the dosage determined by titration: Adjunctive therapy in edema associated with congestive heart failure, hepatic cirrhosis, the nephrotic syndrome. Corticosteroid and estrogen-induced edema, idiopathic edema; hypertension, when the potassium sparing action of triamterene is warranted. (See Box Warning.) Routine use of diuretics in healthy pregnant women is inappropriate; they are indicated in pregnancy only when edema is due to pathological causes.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

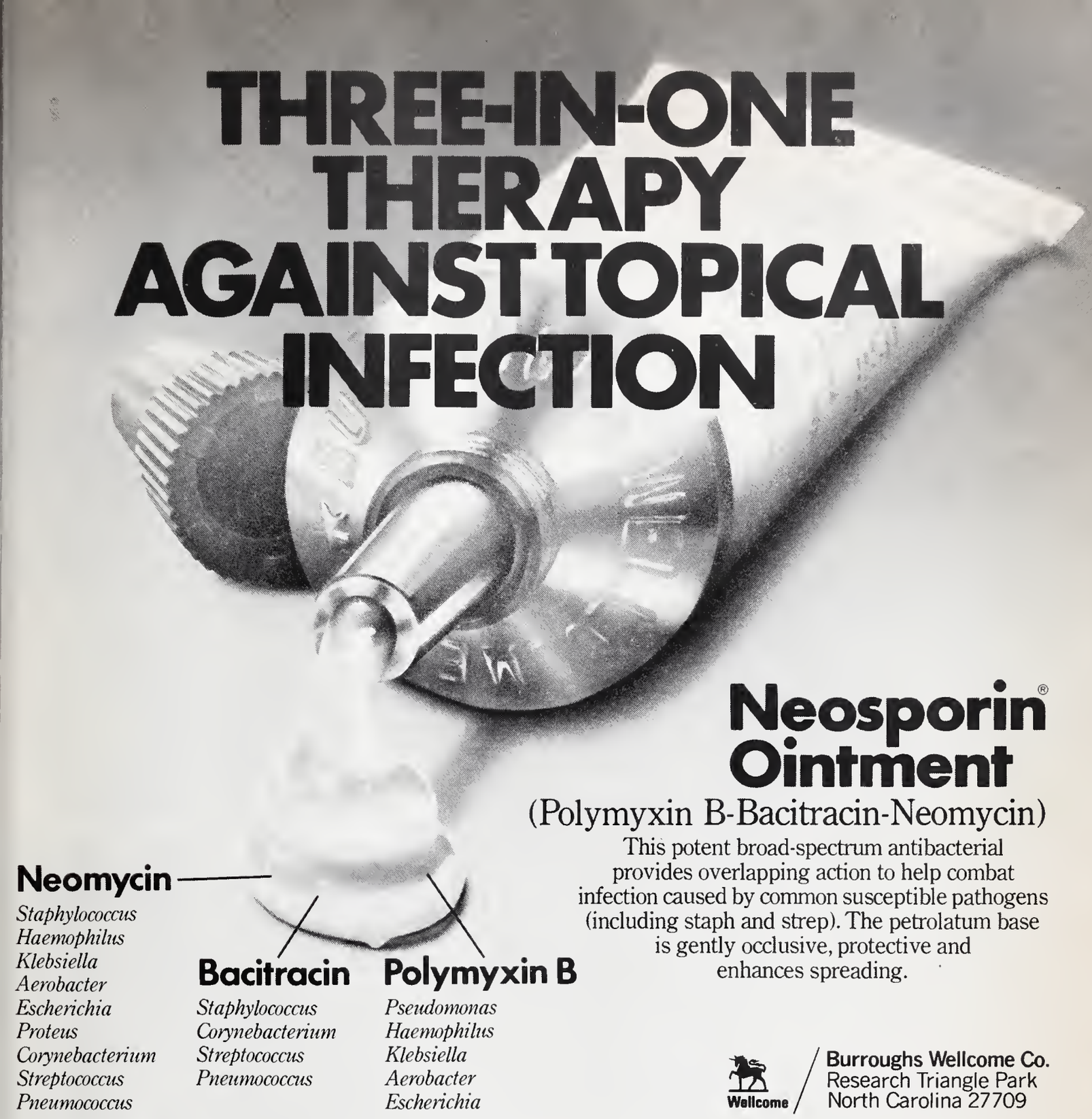
Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

FOR LONG-TERM CONTROL OF HYPERTENSION.* SERUM K^+ AND BUN SHOULD BE CHECKED PERIODICALLY. (SEE WARNINGS SECTION.)

SK&F CO., Carolina, P.R. 00630

SK&F CO.
a SmithKline company

THREE-IN-ONE THERAPY AGAINST TOPICAL INFECTION



Neosporin® Ointment

(Polymyxin B-Bacitracin-Neomycin)

This potent broad-spectrum antibacterial provides overlapping action to help combat infection caused by common susceptible pathogens (including staph and strep). The petrolatum base is gently occlusive, protective and enhances spreading.

Neomycin

Staphylococcus
Haemophilus
Klebsiella
Aerobacter
Escherichia
Proteus
Corynebacterium
Streptococcus
Pneumococcus

Bacitracin

Staphylococcus
Corynebacterium
Streptococcus
Pneumococcus

Polymyxin B

Pseudomonas
Haemophilus
Klebsiella
Aerobacter
Escherichia

In vitro overlapping antibacterial action of Neosporin® Ointment (polymyxin B-bacitracin-neomycin).

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Neosporin® Ointment

(Polymyxin B-Bacitracin-Neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

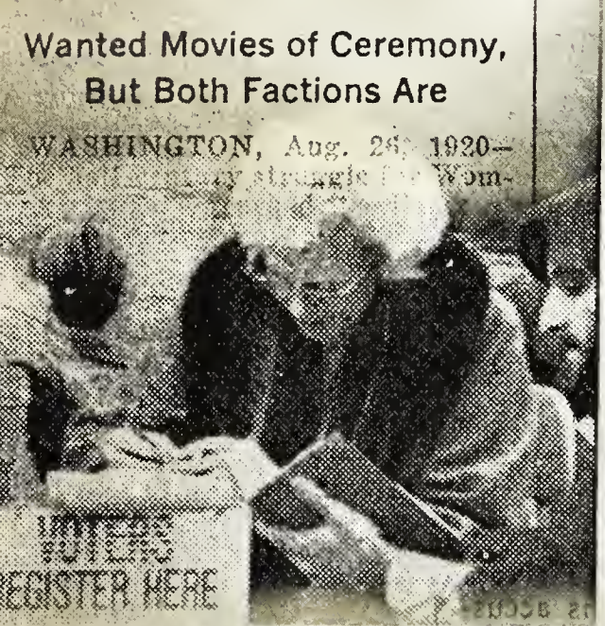
COLBY PROCLAIMS WOMAN SUFFRAGE

Signs Certificate of Ratification at His Home Without Women Witnesses.

MILITANTS VEXED AT PRIVACY.

Wanted Movies of Ceremony, But Both Factions Are

WASHINGTON, Aug. 26, 1920—



Social Security Bill Is Signed; Gives Pensions to Aged, Jobl

Roosevelt Approves Message Intended to Benefit 30,000 Persons When States Adopt Cooperating Laws–He Co the Measure 'Cornerstone' of His Economic Program

WASHINGTON, Aug. 14, The Social Security Bill, pro a broad program of unemplo insurance and old age per and counted upon to benefit 20,000,000 persons, became l day when it was signed by dent Roosevelt in the prese those chiefly responsible fo ting it through Congress.

Mr. Roosevelt call[illegible] the m "the cornerstone [illegible] ste which is being [illegible] me[illegible]s comple[illegible] rin[illegible] to [illegible]

SENATE APPROVES 18-YEAR OLD VOTE IN ALL ELECTIONS

Amendment to Constitution is Sent to House, Where Passage is Expected

WASHINGTON, March 10, 1971—The Senate approved today 94 to 0 and sent to [illegible]

TRUMAN CLOSES TED NATIONS CONFEREN ITH PLEA TO TRANSLATE CHARTER INTO DEEDS

NEW WORLD HOPE

President Hails 'Great Instrument of Peace,' Insists It Be Used

HISTORIC LANDMARK

Meeting Gives Standing Ovation as Executive Pictures Peace Gain

"If we fail to use it," he declared to the solemn final meeting of the delegates, 'we shall betray all of those who have died in order that we might meet here in freedom and safety to create it.'

"If we seek to use it selfishly—for the advantage of any one nation or any small group of nations—we shall be equally guilty of that betrayal."

Fervent Interpolation

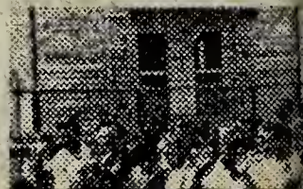
The President, speaking in the auditorium of the War Memorial Opera House, built in memory of sons of the Golden Gate city who gave their lives in the first World War, in which he himself served, seemed to give unconscious expression to the solemn feeling of the occasion when, at the outset of his speech, he interpolated the words, half a hope, half a prayer:

"Oh, what a great day this can be in history!"

Just before the plenary session

JUL SIGNE the Draf Ends No

WASHINGTON, Jan. 27, 1973—"With the signing of the peace agreement in Paris today, and after receiving a report from the Secretary of the Army that



PATIENT PACKAGE INSERTS: A CONCEPT WHOSE TIME HAS COME?

The consumer's right to know is an irreversible and desirable trend of the Seventies. It extends, and properly, to a patient's right to know more about his or her prescription medications. One way, gaining favor, is through patient package inserts. Wisely-prepared and properly distributed when medically indicated, they could markedly improve patient knowledge and drug therapy—laudable goals by anyone's standards.

The PMA endorses these goals and will work with government, the health professions and consumers to achieve them.

The Advantages

The concept holds promise of benefits: better patient understanding of the product prescribed, better adherence to the treatment plan, and more awareness of possible side reactions.

Every doctor has had patients who fail to finish antibiotic regimens because they feel better. Some patients assume that if one tranquilizer or analgesic is good, two may be twice as good. Still others fail to report dizziness while on antihypertensive therapy —and so on.

Problems like these might arise less often if the patient received written information in addition to verbal instructions. Some studies suggest that patients are more receptive to such materials, and they more often understand the verbal instructions and follow them, when inserts are used.

The Disadvantages

There are also some potential problems. Obviously, the inserts must be clearly phrased, without extraneous or complex detail. How much information is enough? How can it be kept current? Should all patients receive the same information? Should inserts be included with all drugs? Should only potential problems be listed or are patients better off with a "fair balance" presentation that describes usefulness as well as drawbacks?

These and similar questions require answers, since model inserts have yet to be properly developed and tested. Despite the need for these studies, the FDA is proceeding prematurely with inserts on selected products. We think the Congress is the only place where the matter can be given the proper legal status and direction, particularly since it represents a conceptual change in the legal, medical and social framework of the nation's prescription drug information system.

The Solution

The PMA believes that carefully-devised pilot studies of various kinds of inserts are needed. They should be developed and implemented with full participation by doctors, pharmacists, consumers, communications experts and the drug industry. Such studies will provide reliable pathways to follow, so that inserts will be useful aids to medical practice.

And particularly we think that you should be closely involved in this debate and in these studies and decisions. Otherwise, people with less experience and qualifications may control the purposes, content and use of a tool with considerable promise for improved patient care. It could make a difference in your practice tomorrow, and more importantly, in the health of your patients.

PMA
THE PHARMACEUTICAL MANUFACTURERS ASSOCIATION
1155 FIFTEENTH ST., N. W., WASHINGTON, D. C. 20005

Surgical treatment of the ischemic limb

LeRoy J. Kleinsasser, MD

Ischemic involvement of the foot and leg may be acute and demanding, and at times life threatening. Atherosclerotic occlusive disease is responsible for the majority of ischemic vascular lesions affecting the lower extremities. Whereas more proximal aortoiliac lesions can be corrected with a high degree of success, distal arterial occlusions are more challenging. The alternative is a major amputation. In an endeavor to determine the value of salvage procedures, an experience of operations upon 55 extremities is reviewed.

Material and Results

In 52 patients, urgent surgical intervention for rest pain or pregangrenous lesions in 55 extremities was required in the past 15 years. There were 35 men and 17 women. Their ages varied from 53 to 87 years with the greatest number (37) in the 60- to 79-year range. Besides cardiovascular disease (Fig 1) manifested by hypertension and coronary artery disease, 11 had diabetes mellitus, 18 were significant tobacco users, and 25 had previous vascular procedures of which 7 were contralateral femoropopliteal bypass grafts (Fig 2). Preoperatively, in addition to careful evaluation of the condition of the patient, angiography was performed to accurately assess the vascular arterial problem so that appropriate surgical procedures could be planned. Runoff was judged good in 11, fair in 27, and poor in 17. The type of runoff did not significantly influence the result as measured by survival of the limb or patency of the graft.

	No.	%
Hypertension	11	21
Coronary artery disease	11	21
Diabetes mellitus	11	21
Smokers	18	35

1. Associated disease.

2. Previous vascular surgery.

	No.	%
Aortoiliac graft and endarterectomy	8	15.4
Contralateral femoropopliteal bypass	7	13.5
Aortic aneurysm resection	4	7.7
Carotid endarterectomy	4	7.7
Aortofemoral bypass	2	3.8

The indication for operation was rest pain in 44 and pregangrenous lesions in 11 extremities. The majority of operations were femoropopliteal or distal bypasses (Fig 3). Of these, only seven were above-the-knee femoropopliteal bypasses, the rest were below the knee. There were eight femorotibial and two femoroperoneal bypasses in this group. Three patients had axillary-femoral bypasses and profundaplasty and two had profundaplasty as the major procedure. Saphenous veins were utilized in 37 grafts, but cloth or bovine grafts were used if necessary. Frequently endarterectomy of the common femoral artery bifurcation was necessary during the procedure. Lumbar sympathectomy was performed simultaneously 45 times where it had not been done previously. Operative arteriograms were taken almost routinely. Heparin was used during the operative procedure to prevent further thrombosis. Postoperative palpable pedal pulses were present in 41 of the 55 bypass grafts. Five grafts clotted early and were promptly reopened; only one leg was lost, in which the indication for surgery was a pregangrenous lesion. Patency, if judged by an improved Doppler pressure at the ankle level, would have increased the percentage of improvement. Of the 55 grafts (Fig 4), 14 closed within one year and 3 within two years, but 38 remained open. Only six major amputations were necessary despite closure of some of the grafts. One transtarsal amputation was necessary in an ischemic foot due

to plantar artery embolization from a popliteal aneurysm. There were three early and four late deaths, a mortality of 13.5%. Five were caused by myocardial infarction and two by cardiovascular accidents.

Discussion

The type of vascular surgical procedure may affect the result. In general, the more distal the graft bypass the higher the failure rate. Femoropopliteal bypass to below the knee was performed in 60% of the grafts because of the frequent involvement of the above-the-knee segment visualized by either preoperative or added operative arteriography. Two-plane arteriographic visualization demonstrates this problem. In all, 78% of grafts extended below the knee. Postoperative palpable pedal pulses were present in 74.5% of the patients, and patency, if judged by improved Doppler pedal pressures, was even higher. Femoroperoneal bypass, where the peroneal artery is the remaining runoff, can be performed satisfactorily. Salvage of the severely ischemic lower extremities was achieved in 5 of 14 patients after femoroperoneal bypass by Reichle and Tyson.[1] Graft patency does not assure limb salvage, as four limbs were lost despite open grafts. I think that revascularization by peroneal bypasses is preferable to primary amputation in patients with rest pain or gangrenous changes. Mandatory to the success of distal arterial bypass is a satisfactory runoff, the patency of the plantar artery arch.[2]

Profundaplasty recently has been increasingly utilized, although profundaplasty alone is not as effective as when it is combined with proximal reconstruction. This method was successfully used in 9.1% in the present series. Martin and Jamieson[3] reported a success rate of 77% (30/39) in profundaplasty performed for distal gangrene and rest pain. In contrast, of 153 limbs with proximal reconstruction and profundaplasty, the success rate was over 90% (15/153). The profunda femoris artery has been found to be involved in 60% of patients with peripheral lower extremity arterial involvement in whom arteriography is performed. In instances where the superficial femoral artery is occluded, it is the important blood supply to the leg. Involvement of this artery frequently can be detected by anterior-posterior view, but as many as 82% of cases can be detected[4] when oblique arteriograms are secured as recommended by Beales and associates.[5] This artery should be explored in all cases of femoral artery reconstruction. The addition of axillary-femoral bypass is an excellent procedure[6] in the poor-risk patient and should be a bilateral femoral bypass where indicated, especially since there is evidence to suggest a better five-year patency rate

	No.	%
Femoropopliteal bypass		
Below the knee	33	60.0
Above the knee	7	12.7
Femorotibial	8	14.5
Femoroperoneal bypass	2	3.6
Axillofemoral bypass and profundaplasty	3	5.5
Profundaplasty	2	3.6
Lumbar sympathectomy		
Simultaneously	45	81.8
Previously	10	18.2

3. Vascular procedures.

4. Results, 55 grafts.

	No.	%
Closed within one year	14	25.5
Closed within two years	3	5.5
Remained open up to 88 months	38	69.0
Major amputations	6	11.0
Mortality		
Early (within one month)	4	7.7
Late deaths	3	5.8

with the latter.[7] Lumbar sympathectomy is an important adjunct to grafting procedures and was done, simultaneously, 45 times where it had not been done previously. The initial increase in flow in the extremity following lumbar sympathectomy may be important in the immediate patency of these grafts[8] and may aid in the preservation of the extremity whenever the graft fails.

An early limb salvage rate of 89% in the present series indicates the desirability of vascular reconstructive surgery for rest pain and pregangrenous lesions. Limb salvage occurred even though all grafts did not remain patent. The amputation rate of 10.9% in this series representing failures of arterial reconstruction compares favorably with that of other reports.[9] All of these were above the knee level. This lends credence to the possibility that the level of amputation was influenced by the unsuccessful vascular reconstruction. Schlenker and Wolcoff[10] report 46 major amputations in a group of 209 femoropopliteal bypasses or endarterectomies involving the popliteal artery. They found that below-the-knee amputations were more likely to be successful if no previous vascular reconstruction had been performed. Increased ischemia following graft occlusion appears to be the main factor leading to above-the-knee amputation. Kihn, Warren, and Beebe,[11] in a review of 559 amputations in 427 patients, found little difference in healing rate between patients without previous arterial reconstruction and those with previous reconstructive procedures, except in the above-the-knee amputations where the differences were 95% and 74% healing, respectively. Similar rate for below-the-knee amputation were 79% and 75%. Burgess and Marsden[12] compared 142 major amputations to a like number of amputations without previous vascular surgery. They found that the knee joint was saved in 75% of limbs with failed arterial reconstruction, and in 83% of those having no reconstruction. This was possible despite the delayed healing and local wound complications. These were more frequent with the post-reconstruction ischemic amputation, especially if done within the first four weeks. However, included in this list of operations were 36 sympathectomies, which would seem to dilute their interpretation.

Although the five-year survival rate for limb salvage reconstructive procedures by femoropopliteal bypass had been reported as being rather low,[8,13] I believe that the procedure is justified. DeWeese and Rob[13] found that even though 62% of the patients undergoing femoropopliteal bypass for rest pain or gangrene died within five years postoperatively, the bypass grafts prevented amputation of extremities in 64% of that subgroup of patients. However, they think the survival was related to the extent of disease for which the procedure was done: poorest in femoropopliteal bypass for limb salvage. Cutler and associates[8] found the survival rate to be more closely related to the runoff, as low as 28%. This was even less in the presence of associated hypertension, diabetes mellitus, and coronary artery or cerebrovascular disease.

Summary

Fifty-five limb salvage procedures were performed in 52 patients. Six different types of procedures were employed with an immediate patency rate of 75% as judged by palpable pulses, and higher if judged by results of Doppler studies. Thirty-eight of the 55 grafts remained open; six required above-the-knee amputation of the leg.

There was an immediate mortality of 5.8% and a late mortality of 7.7%.

Vascular reconstructive surgery for limb salvage is justified. Limb salvage may result even though the graft may later close, allowing healing of skin ulcerations.

References

1. Reichle RA, Tyson RR: Femoroperoneal bypass: evaluation of potential for revascularization of the severely ischemic lower extremity. Ann Surg 181:182-185, 1975.
2. Kahn SP, Lindernauer SM, Dent TL, et al: Femorotibial vein bypass. Arch Surg 107:309-312, 1973.
3. Martin P, Jamieson C: The rationale for and measurement after profundaplasty. Surg Clin N Amer 54:95-109, 1974.
4. Thompson BW, Read RC, Campbell GS, et al: The role of profundaplasty in revascularization of the lower extremity. Am J Surg 132:710, 1976.
5. Beales JS, Adcock FA, Frawley JS, et al: The radiological assessment of the profunda femoris artery. Br J Radiol 44:854-859, 1971.
6. Blaisdell FW, Hall AD: Axillary-femoral artery bypass for lower extremity ischemia. Surgery 563-568, 1963.
7. LoGerfo FW, Johnson WC, Corson JD, et al: A comparison of the late patency rates of axillobilateral femoral and axillounilateral femoral grafts. Surgery 81:33-40, 1977.
8. Cutler BS, Thompson JE, Kleinsasser LJ, et al: Autologous saohenous vein femoropopliteal bypass: analysis of 298 cases. Surgery 79:325-331, 1976.
9. Collins GJ Jr, Rich NM, Anderson CA: Limb salvage procedures for lower extremity ischemia. Am J Surg 132:707-709, 1976.
10. Schlenker JD, Wolkoff JS: Major amputations after femoropopliteal bypass procedures. Am J Surg 129:485-489, 1975.
11. Kihn RB, Warren R, Beebe GW: The "geriatric" amputee. Ann Surg 176:305-314, 1972.
12. Burgess EM, Marsden FM: Major lower extremity amputations following arterial reconstruction. Arch Surg 108:655-660, 1974.
13. DeWeese JA, Rob CG: Autogenous venous bypass grafts five years later. Ann Surg 174:346-356, 1971.

Dr. LeRoy J. Kleinsasser, Baylor Medical Plaza, 3600 Gaston Ave, Dallas, TX 75246.

Primary aldosteronism

Mark R. Swanson, MD; Jay C. Fish, MD

Hypertension affects about 20 million people in the United States. About 10% of these patients have a definable, correctable etiology for their hypertension.[7] The others must be treated with medication for the rest of their lives. The importance of recognizing the patient whose hypertension can be cured is obvious.

Hyperaldosteronism, Conn's syndrome, is an uncommon cause of hypertension and is surgically correctable. The key to its recognition in the hypertensive patient is the associated low level of serum potassium. Hypokalemia not resulting from diuretics should be investigated for its cause. The initial evaluation is simple although confirmation is complex. This report describes investigations and results in four patients from The University of Texas Medical Branch Hospitals.

Clinical Experience

The patients were 18 to 50 years of age. Three patients were white women and one patient was a black man. Presenting symptoms included headache, nocturia, weakness, and paresthesias.

The four patients were referred because of unexplained hypokalemia associated with hypertension. Evaluation of all four patients included measurement of blood pressure, serum electrolytes, and 24-hour urinary excretion of sodium and potassium, intravenous pyelography and transperitoneal exploration of the adrenal glands. Evaluation of three of the patients also included 24-hour urinary aldosterone secretion rates, plasma renin levels on high (190 mEq/24 hr) and low (20 mEq/24 hr) sodium diets, and bilateral adrenal venography.

Results

All four patients demonstrated sustained diastolic hypertension from 100 to 110 mm Hg. Each patient manifested hypokalemic alkalosis with a mean serum potassium value of 2.6 mEq/liter and a mean serum bicarbonate value of 26 mEq/liter (Fig 1). Urinary excretion of aldosterone was elevated, while plasma renin values on both low and high sodium diets were depressed. Urinary excretion of sodium per 24 hours on low and high sodium intake averaged 32 and 204 mEq, respectively. Urinary excretion of potassium per 24 hours on low and high sodium intake averaged 77 and 84 mEq, respectively (Fig 2). Venography localized an adrenal mass in two patients, failed to demonstrate a lesion in one patient, and was not performed in the fourth patient (Fig 3). In retrospect, the false-negative study, though technical-

1. Primary aldosteronism.

Patient	Blood Pressure (mm Hg)	Serum Potassium (mEq/liter)	Serum Bicarbonate (mEq/liter)	Intravenous Pyelogram
1	130/100	2.1	34	Normal
2	190/100	2.4	41	Normal
3	160/100	3.1	30	Normal
4	165/110	2.7	37	Right nephrolithiasis

ly adequate, unsuccessfully visualized a one-centimeter mass. All four patients had adrenal adenomas on the left side ranging in size from 0.8 to 2.0 cm. The tumors were removed by transabdominal adrenalectomy. The right adrenal gland was normal by inspection in each instance.

In all four patients, the hypokalemic alkalosis disappeared within ten days without potassium supplementation. Two of the patients became normotensive within the first week and have remained normotensive to date (six months). One patient became normotensive after three months and has remained so without medication for 16 years. The fourth patient required a diuretic and α methyldopa for 13 months after adrenalectomy. After 24 months he became normotensive and has remained so without medication for 12 months.

Discussion

The hypertensive patient with hypokalemia unexplained by diuretics or chronic diarrhea should be examined for hyperaldosteronism, a surgically correctable cause of hypertension. Under physiologic conditions, aldosterone is released following a decrease in effective intravascular volume mediated through the renin-angiotensin system. Secretion of aldosterone varies from 50 to 200 μg/24 hr and is characterized by a circadian rhythm.[5] Aldosterone stimulates sodium reabsorption in the distal tubule of the kidney and simultaneously increases potassium and hydrogen ion excretion.

In 1954, Jerome Conn of Michigan described a clinical syndrome induced by overproduction of aldosterone independent of the renin-angiotensin axis. Hypertension, hypokalemia, and metabolic alkalosis were constant findings. The autonomous secretion of aldosterone inhibited the production of renin and increased sodium reabsorption and potassium and hydrogen ion excretion. This accounted for the low plasma renin, hypernaturemia, and hypokalemic alkalosis.[2] Persistent hypertension was explained by an increase in plasma volume, although the possibility of a strong

2. Primary aldosterone.

Patient	Urine Aldosterone µgm/24 hr*	Plasma Renin ng/ml/hr Dietary Sodium/24 hr 20 mEq†	190 mEq‡	Urine Sodium mEq/24 hr Dietary Sodium/24 hr 20 mEq	190 mEq	Urine Potassium mEq/24 hr Dietary Sodium/24 hr 20 mEq	190 mEq
1	33	0.5	0.3	15	217	112	135
2§	—	—	—	50	210	88	70
3	40	0.4	0.3	—	171	50	62
4	50	0.6	0.5	32	218	58	68

*Normal values, 2-26 µgm/24 hr.
†Normal values, 1.9-10.2 ng/ml/hr (upright posture).
‡Normal values, 1.0-4.5 ng/ml/hr (upright posture).
§Aldosterone and renin assays were not available at the time of this patient's evaluation.

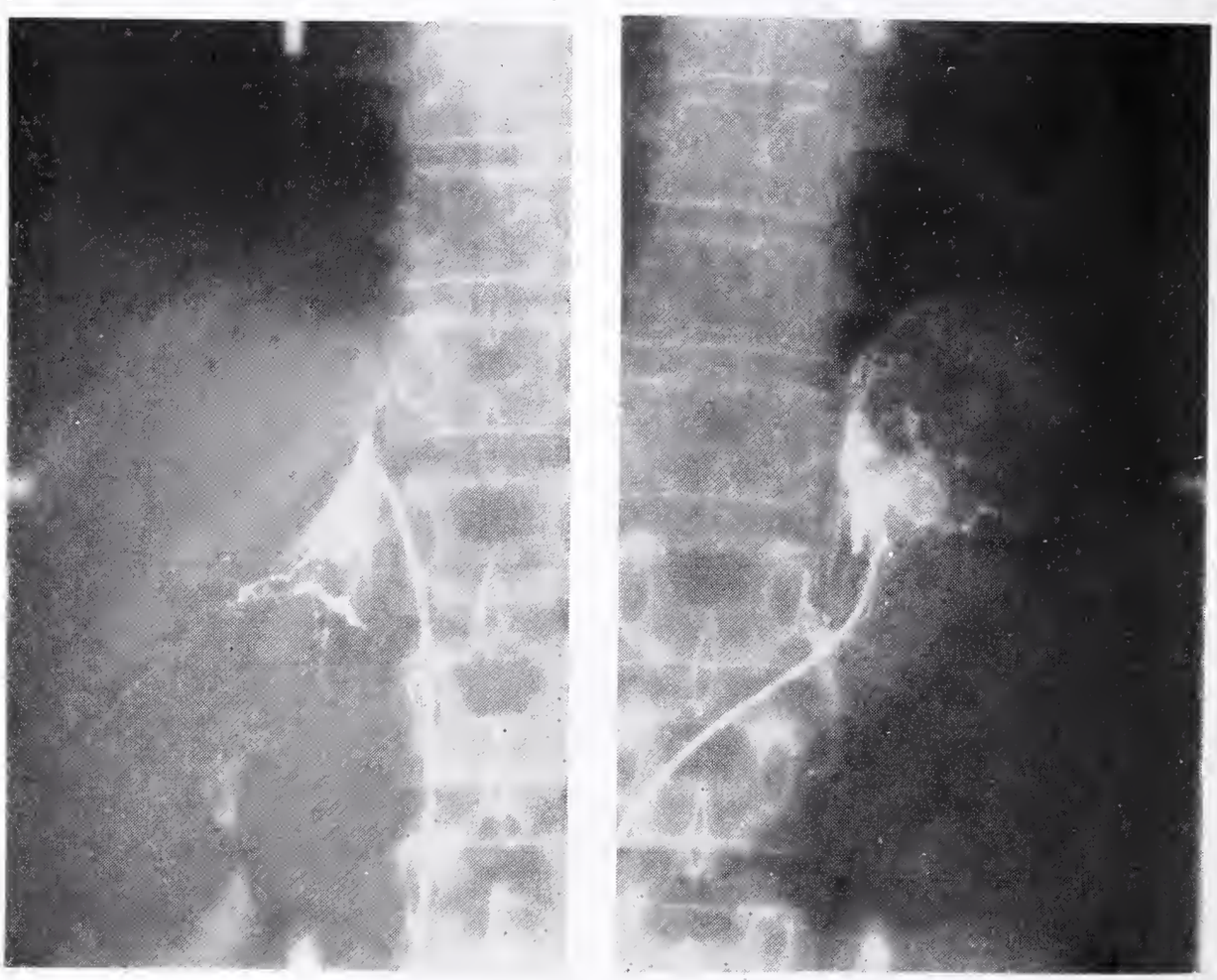
cardiotonic effect of aldosterone also was postulated.[9]

The patient with hypertension, unexplained hypokalemia, and a presumptive diagnosis of excessive mineralocorticoid production, should be investigated in a unit where dietary sodium can be controlled. Twenty-four-hour urine specimens should be obtained for aldosterone, 17-hydroxysteroids, 17-ketosteroids, sodium, potassium, and plasma renin determinations on both low and high sodium diets. Increased urinary aldosterone and potassium excretion, plus persistently depressed plasma renin levels, should prompt bilateral adrenal venography. This technique for adrenal visualization will demonstrate a cortical adenoma with 90% accuracy.[6]

The lesions responsible for Conn's syndrome include single adenoma (90%), bilateral hyperplasia (9%), and carcinoma (1%).[3] Simple adenoma requires unilateral adrenalectomy while carcinoma necessitates an en bloc resection. The treatment of hyperplasia is controversial. Medical management with an aldosterone antagonist may be preferable to bilateral adrenalectomy.[4]

The important preoperative preparation is correction of the patient's hypokalemia

3. Retrograde adrenal venograms (patient no. 3). The right gland is normal. The left gland shows a round discrete mass at the lateral inferior margin.



with supplemental oral or parenteral potassium chloride. Following unilateral adrenalectomy, there is no need for adrenal steroid substitution therapy since the remaining adrenal's glucocorticoid secretion is not suppressed by the hyperaldosteronism.[1]

A prompt postoperative rearrangement of electrolytes occurs with sodium diuresis, potassium retention, and return of the blood pH to normal. These changes are complete by the third postoperative week, while the duration of the hypertension is variable. Aldosterone secretion in the remaining adrenal gland gradually returns to normal following unilateral adrenalectomy.[8]

Summary

Four patients were referred with persistent hypertension and unexplained hypokalemic metabolic alkalosis. Metabolic studies revealed increased urinary excretion of potassium and aldosterone with depressed plasma renin levels. Adrenal venography successfully located cortical adenomas in two of the patients. All four patients had single adrenal cortical adenomas on the left side documented at operation. Transabdominal unilateral adrenalectomy resulted in correction of the metabolic abnormalities within two weeks and return of blood pressure to normal. Though rare, hyperaldosteronism represents a surgically curable cause of hypertension.

References

1. Hunt TK. Schambelan M, Biglieri EG: Selection of patients and operative approach in primary aldosteronism. Ann Surg 182(4):353-361, 1975.

2. Conn JW: Aldosteronism in hypertensive disease. Med Times 98:116-132, 1970.

3. Conn JW: Evolution of primary aldosteronism as a highly specific clinical entity. JAMA 172:1650-1653, 1960.

4. Delarue NC, Laidlaw JC, Kovacs K, et al: Hypertension due to "primary" hyperaldosteronism—surgical considerations. Surgery 80:289-296, 1976.

5. Laragh JH, Baer L, Brunner HR, et al: Renin, angiotensin and aldosterone system in pathogenesis and management of hypertensive vascular disease. Am J Med 52:633-652, 1972.

6. Melby JC: Solving the adrenal lesion(s) of primary aldosteronism, editorial. N Engl J Med 294(8):441-442, 1976.

7. Motsay GJ, Alho A, Lillehei RC: Diastolic hypertension corrected by operation: a review. J Surg Res 15:433-449, 1973.

8. Silen W, Biglieri EG, Slaton P, et al: Management of primary aldosteronism: evaluation of potassium and sodium balance, technic of adrenalectomy and operative results in 24 cases. Ann Surg 164:600-610, 1966.

9. Tarazi RC, Ibrahim MM, Braud EL, et al: Hemodynamic characteristics of primary aldosteronism. N Engl J Med 289:1330-1335, 1973.

Mark R. Swanson, MD, and Jay C. Fish, MD, Department of Surgery, The University of Texas Medical Branch, Galveston, TX 77550.

Corrosive acid burns of the stomach

Corrosive acid burns of the stomach are uncommon but important causes of postinflammatory stenosis of the pyloric channel and gastric antrum. They occur primarily in children, young adults, and psychiatric patients. Acid damage usually spares the esophagus but involves the antrum and pylorus. Two cases are reported here. In one case, the patient was nearly asymptomatic and did not require surgical treatment. The other was treated by pyloroplasty.

Postinflammatory pyloric and antral stenosis secondary to ingestion of corrosive acids represents a characteristic but not widely recognized pathological entity. Allen and associates[1] and Gray and Holmes[2] both referred to Robert's first case report in 1828 of gastric damage from ingestion of sulfuric acid.

The patient died nine weeks later with severe pyloric stenosis and ulcerative lesions in the stomach. Boikan and Singer[3] mentioned Halsted's 1917 report of midgastric stenosis with obliteration of the pyloric canal after the patient had ingested sulfuric acid.

Ingestion of acidic corrosive agents is notorious for producing coagulation necrosis of the gastric mucosa, usually with little or no damage to the esophagus, as opposed to the lesions induced by alkaline corrosives.[1]

Case Reports

The following are case reports of two patients with corrosive acid burns of the stomach:

Case 1: An 11-month-old Latin-American girl was admitted to Scott and White Memorial Hospital after ingesting approximately 30 ml of sulfuric acid from a car's battery. Before admission, she had vomited coffee-ground material five times. On admission, she had a whitish exudate throughout her mouth but there were no burns on the lips or pharynx. Vital signs and abdominal findings were within normal limits. A nasogastric tube was passed and the stomach was lavaged for ten minutes with saline and then milk. Oral antacids, parenteral fluids, and hydrocortisone (200 mg every six hours) were given. Intermittent hematemesis continued for four days, causing the hematocrit value to drop from 39% to 32%. When the patient was dismissed from the hospital, after she was able to tolerate a regular diet, a regimen of tapering doses of steroids was prescribed.

Three weeks after the injury, she began to vomit again and became moderately lethargic; weight loss was 1 kg. Her rectal temperature was 38.4° C. Laboratory data included: serum potassium, 3.5 mEq/liter; chloride, 102 mEq/liter; carbon dioxide, 14 mEq/liter; hematocrit, 35%; blood urea nitrogen, 30.5 mg/dl; and creatinine, 1 mg/dl. An upper gastrointestinal series demonstrated significant gastric dilatation (Fig 1), increased peristalsis, and a 2-cm segment of narrowing in the distal antrum and pylorus (Fig 2).

The metabolic abnormalities were corrected within 48 hours, but the gastric retention remained unchanged. Laparotomy revealed a narrow and inflamed pyloric canal. The intestinal wall was thick and the mucosa was friable.

A Heineke-Mikulicz pyloroplasty with the Weinberg modification was performed. Recovery was uneventful. At examination six weeks later, the child was asymptomatic, and an upper gastrointestinal series showed free passage of

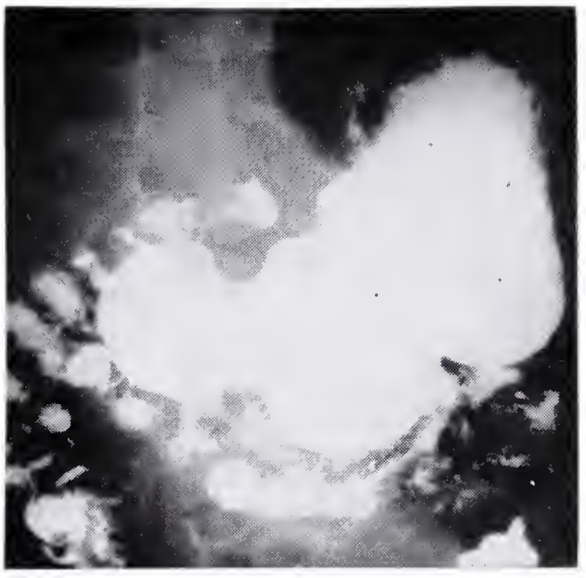
Juan F. Jimenez-Chapa, MD
Roberto O. Chiprut, MD
William J. Hardin, MD
Thomas R. Liebermann, MD

barium through the pylorus with minimal scarring.

Case 2: A 43-year-old Caucasian man accidentally ingested a small amount of sulfuric acid and immediately experienced severe epigastric pain and vomiting. He was hospitalized for treatment with antacids, gastric lavage, and parenteral fluids. After a few days, he became asymptomatic and was dismissed.

Three weeks later, he noted bloating, foul-smelling belching, and postprandial epigastric distress. Results of physical examination were unremarkable but an upper gastrointestinal series revealed persistent deformity of the entire gastric antrum with a 5-mm ulcer (Fig 3). Gastroscopy confirmed the presence of a fixed deformity of the antrum; enlargement of surrounding folds caused narrowing of the lumen (Fig 4). Biopsies demonstrated inflammatory and fibrotic changes only. The patient was treated with antacids and his symptoms disappeared rapidly. On a roentgenogram six months later, the appearance was unchanged.

One year later, the patient died suddenly because of an acute myocardial infarction. Autopsy showed that the gastric antrum was thickened, the mucosa was still inflamed, and fibrosis was most prominent in the submucosa.



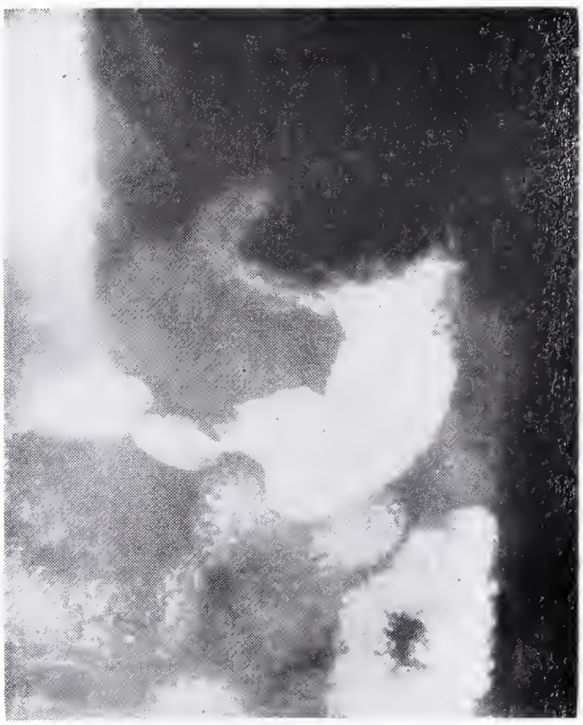
1. Case 1. Upper gastrointestinal roentgenogram showing significant gastric dilation and pyloric narrowing.

2. Case 1. Narrowing of 2-cm segment of distal antrum and pylorus.

Discussion

Corrosive substances are classified into four major categories:[1] (1) fixatives such as phenolic acid and formaldehyde; (2) destructive substances such as sulfuric, nitric, and hydrochloric acids; (3) softeners such as alkalies, disinfectants (Lysol), and lye; and (4) weak substances such as oxalic acid and arsenic.

The anatomic separation of the sites of



3. Case 2. Persistent deformity of the gastric antrum.

4. Case 2. Gastroscopic picture showing narrowed gastric lumen with prominent surrounding folds.

maximal injury by alkalies and acids is merely statistical and by no means absolute.[4] The esophageal mucosa is moderately resistant to acidic agents. It has been estimated[3,5] that esophageal injury after ingestion of a corrosive acid occurs in about 20% of the patients.

Hydrochloric acid is the most commonly reported agent causing pyloric obstruction.[3] Sulfuric acid is more commonly ingested but causes death in a larger number of cases and therefore the frequency of chronic sequelae is less. The degree of damage to the stomach depends on the amount of acid ingested, its strength, the duration of contact with the mucosa, the presence or absence of food in the lumen that could mix with the agent, and the relative tone of the pyloric sphincter.[6] The immediate results of ingestion may be hemorrhage or perforation with peritonitis.

Late sequelae depend on the degree of destruction and resultant scar formation and consist of pyloric or antral obstruction or both, hourglass deformity of the stomach or, rarely, total gastric scarring resulting in linnitis plastica.[7]

When the acute damage is not fatal, several weeks later the patient will usually present symptoms of gastric outlet obstruction such as anorexia, bloating, eructation, epigastric fullness, weight loss, and intermittent or persistent vomiting. Examination may reveal dehydration, emaciation, visible peristaltic waves in the abdomen, and various degrees of electrolyte imbalance.[8-10]

Supportive care to resuscitate acutely ill patients consists of parenteral fluid administration and blood transfusions. Gastric lavage via a nasogastric tube may increase the damage to the gastric or esophageal walls; however, the use of demulcents such as milk, olive oil, egg white, or

antacids dilutes the irritant that is still present in the stomach and is encouraged. The role of steroids is not fully established but there is some evidence to support their use in the acute phase as anti-inflammatory agents.[11]

If acute peritonitis develops and surgery is necessary, a highly inflamed stomach is usually found. The surgical procedure then should be limited to jejunostomy.[1] However, there have been cases of acute gangrene of the entire stomach requiring total gastrectomy.[1]

Fiberoptic gastroscopy can be useful to assess the extent of damage. It should not be used in a critically ill patient, a patient with severe airway damage resulting from inhalation of acid into the respiratory tract, or in a patient in whom perforation of the viscus is suspected.

Roentgenograms of the upper gastrointestinal tract should be taken a week after the episode and repeated later to evaluate the extent of injury and subsequent strictures. Delaying surgical treatment until 8 to 12 weeks after the ingestion usually produces better results.[7] It is easier for the surgeon to evaluate the extent of damage and perform resections with anastomoses when definite demarcation is present between normal and damaged tissues.

Presently, a subtotal gastrectomy is the operation of choice if both pylorus and antrum are damaged and there is evidence of persistent obstruction; for the asymptomatic patient, careful observation may suffice.

References

1. Allen RE, Thoshinsky MJ, Stallone RJ, et al: Corrosive injuries of the stomach. Arch Surg 100:409-413, 1970.

2. Gray HK, Holmes CL: Pyloric stenosis caused by ingestion of corrosive substances: report of case. Clin North America 28:1041-1056, 1948.

3. Boikan WS, Singer HA: Gastric sequelae of corrosive poisoning. Arch Int Med 46:342-357, 1930.

4. Tucker As, Gerrish EW: Hydrochloric acid burns of the stomach. JAMA 174:890-893, 1960.

5. Alford BR, Harris HH: Chemical burns of the mouth, pharynx and esophagus. Ann Otol Rhinol Laryngol 68 (1) :122-128, 1959.

6. Herrington JL Jr: Stenosis of the gastric antrum and proximal duodenum resulting from the ingestion of a corrosive agent. Am J Surg 107:580-585, 1964.

7. Steigmann F, Dolehid RA: Corrosive (acid) gastritis; management of early and late cases. N Engl J Med 254:981-986, 1956.

8. Karon AV: The delayed gastric syndrome with pyloric stenosis and achlorhydria following the ingestion of acid. A definite clinical entity. Am J Dig Dis 7:1041-1046, 1962.

9. Maggi ALC, Meeroff M: Stenosis of the stomach caused by corrosive gastritis. Gastroenterology 24:573-578, 1953.

10. Strode EC, Dean ML: Acid burns of stomach, report of 2 cases. Ann Surg 131:801-811, 1950.

11. Chong GC, Beahrs OH, Payne WS: Management of corrosive gastritis due to ingested acid. Mayo Clin Proc 49:861-865, 1974.

Juan F. Jimenez-Chapa, MD, 800-804 South Main, McAllen, TX 78501.

Roberto O. Chiprut, MD, Hepatology Department, VA Hospital, Miami, FL 33101.

William J. Hardin, MD, Department of General Surgery, and Thomas R. Liebermann, MD, Section of Gastroenterology, Scott and White Memorial Hospital, Temple, TX 76501.

Correspondence and reprint requests to Dr Liebermann.

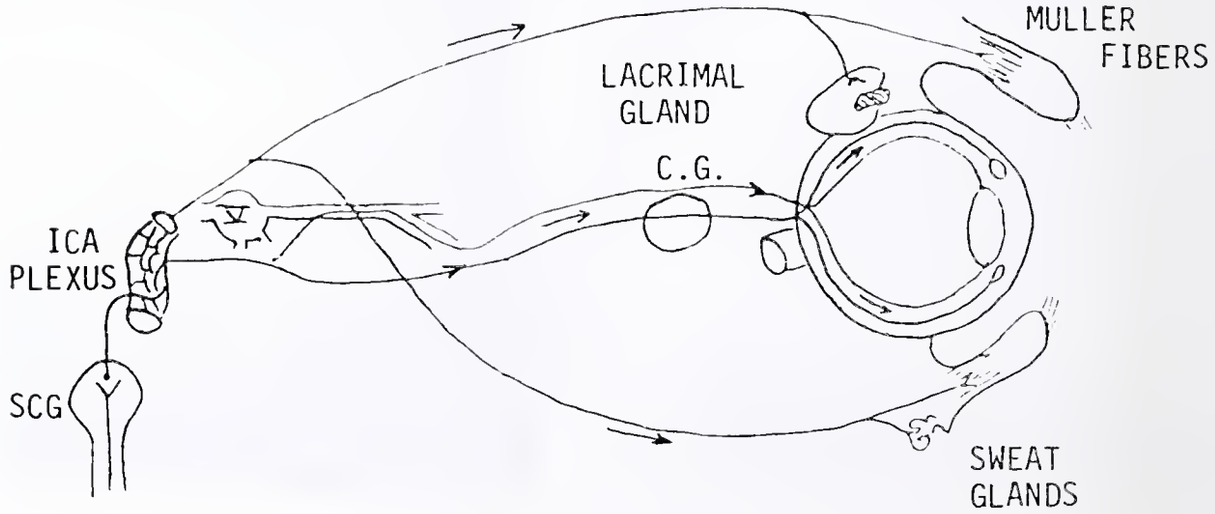
Lost lid signs in topical neuro-ophthalmic diagnosis

Robert A. Laibovitz, MD; Robert Cain, MD

Two common clinical entities have lid signs that are important in diagnostic evaluation. Both Horner syndrome and thyroid eye disease often present with subtle but diagnostic lid signs. It is our purpose to describe two rather poorly appreciated lid signs that are helpful in establishing the diagnosis both in Horner syndrome and thyroid eye disease.

It is well appreciated that Horner syndrome has multiple eye signs including the classic triad of ptosis, miosis, and hypohidrosis.[1,2] We have seen several patients in whom the diagnosis of third-order neuron or postganglionic Horner syndrome has been made with pharmacologic testing using pupillary signs.[3] We have found that 2.5% phenylephrine is helpful in establishing the diagnosis of third-order Horner syndrome using a characteristic lid sign. In the sympathetic pathway to the eye, the first neuron begins in the hypothalamus and ends in the intermediolateral cell column at the level of C8 to T2 in the spinal cord (ciliospinal center). The second neuronal fibers leave the spinal cord and travel superiorly to synapse in the superior cervical ganglion. The third order, or postganglionic, fibers travel from the superior cervical ganglion onto the common carotid artery and finally to the eye and ocular adnexa, including Müller's muscle (Fig 1). By instilling one drop of 2.5% phenylephrine in each eye and comparing lid positions after five minutes, one can see that the lid on the side affected by Horner syndrome is consistently retracted in comparison to the uninvolved side. This retraction is based on denervation hypersensitivity of the lid elevator (Muller's muscle), innervated by the sympathetic nervous system. This test must be performed before dilatation of the pupils with strong mydriatics such as 10% phenylephrine, because this may cause lid retraction in the normal eye.[4] We have also found that a 1:1000 solution of epine-

1. Sympathetic pathway to the ocular and intraorbital structures. CG, ciliary ganglion; SCG, superior cervical ganglion. Sympathetic vasomotor fibers from the internal carotid artery plexus, ICA, travel through the ciliary ganglion to innervate the blood vessels and branched melanocytes of the uveal tract. From Homans, John, "A Textbook of Surgery," 6th ed 1945, Courtesy of Charles C Thomas, Publisher, Springfield, Ill.



phrine does not elicit this sign in the lid.[4,5] We encourage other clinicians to use this test and to report their findings.

Thyroid eye disease may first present with a subtle lid retraction that gives the appearance of a stare or proptosis.[1] The lid retraction may be entirely unilateral, increasing one's suspicion of proptosis. We have found that passive movement or tugging down on the retracted upper lid often presents a sensation of increased resistance. This is done by simply grasping the cilia of the upper lid and gently pulling down. This may be compared to the contralateral lid in unilateral cases, or to a control normal lid in cases of bilateral lid retraction. Even in bilateral involvement, the retraction may be asymmetrical and a greater resistance may be felt on tugging one lid. We have found our "lid tug sign" to be a useful and specific additional clinical sign in establishing the diagnosis of thyroid eye disease.

We hope that other clinicians will use both the "phenylephrine retraction test" and the "lid tug sign" in office diagnosis.

References

1. Walsh FB, Hoyt WF: Clinical neuro-ophthalmology, ed 3. 1969, pp 514-517, 1079-1080.
2. Solnitzky O: Horner syndrome. Georgetown Med Bull 13, 14:204-222, 1959-1961.
3. Neuro-ophthalmology Symposium. Bascom Palmer Eye Institute, 8:265-270, 1975.
4. Havener WH: Ocular pharmacology, ed 2. St Louis, C V Mosby, 1970, pp 444-445.
5. Beard C: Ptosis. St Louis, C V Mosby, 1969, p 54.

Robert A. Laibovitz, MD; 3301 Northland Dr No. 214, Austin, TX 78731.

Robert Cain, MD, 1111 W 34th, Austin, TX 78705.

Information for authors

Texas Medicine is a scientific, clinical journal published primarily for members of the Texas Medical Association. In addition, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, coming meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Executive Editor, 1905 North Lamar Blvd., Austin 78705. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Scientific Articles
Manuscripts should be typed double-spaced with ample margins on firm paper. Two copies should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

References
Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrative Material
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously Published Material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with the manuscript.

Editorials
Editorials should be prepared in the same general manner, and should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the Executive Editor and consultants.

News
News items should be sent to the Editorial Offices, 1905 North Lamar Blvd., Austin 78705.

Continuing Education, Meetings
Continuing education courses and medical meetings are listed in each issue. Information about courses should include title, sponsor, location, dates, duration, fee, how many may enroll, for whom the course is designed, teaching methods, type and number of hours credit, and name and mailing address of a person to contact.

Information about meetings should include the name of the organization, place and inclusive dates, and name and mailing address of a person to contact. Program topics and names of speakers may be included as space permits.

Material should be submitted in writing six weeks before publication; for example, information for the June issue (published June 1) is needed by April 15.

Obituaries
Obituaries of deceased TMA members are published if adequate information is received within four months of date of death. When notifying the editors of a member's death, please give the name and address of next of kin.

Policy on Columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

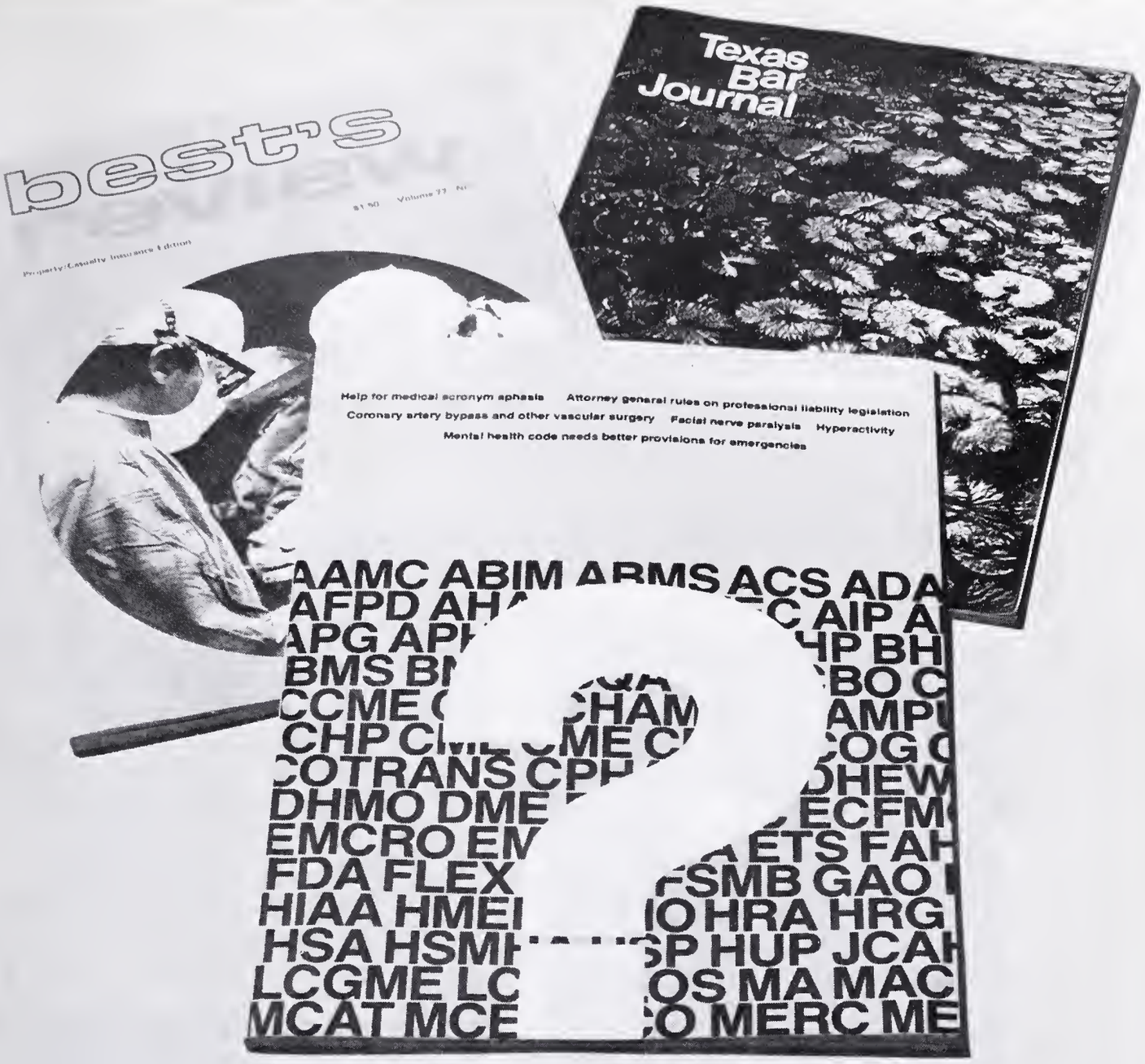
The Scientific Publication Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the Committee and the editors will consider development of a column.

Editing
All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints
Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright
Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the Executive Editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine.*

Point of View
Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.



What we read at ICA.

Our reading interests are a lot like yours. And what we read tells you who we are. A highly specialized company of doctors, lawyers and insurance experts.

Only this broad range of expertise can assure you the kind of insurance protection your practice needs.

The professional company that takes care of professionals. Like you.

INSURANCE CORPORATION OF AMERICA
HOUSTON, TEXAS
713/526-4863

Our policy is protecting your practice.

A: XV Reinsurance Protection provided, A.M. Best & Co. (Highest Financial Rating Available)

A&M—the state's newest medical school

The state's newest medical school opened this fall at Texas A&M University with a concept that offers its students the opportunity to complete their studies in a shorter time period than in traditional programs.

Texas A&M's medical program has been formed over the past five years in association with Scott and White Hospital, the Veterans Administration, and Baylor College of Medicine.

The Veterans Administration awarded Texas A&M grants totaling more than $17 million under provisions of the Veterans Administration Medical School Assistance and Health Manpower Training Act designed to help relieve the shortage of physicians and allied health personnel generally and particularly with the Veterans Administration system.

Medical program

Texas A&M's medical school differs from traditional programs in that students may be accepted and begin their medical studies prior to receiving their undergraduate degrees.

Under the Texas A&M concept, students will follow a preclinical curriculum during what would normally be their junior and/or senior years on the main Texas A&M campus and then continue with the clinical phases of their medical education for two years at locations away from College Station, including Scott and White Hospital in Temple and the Veterans Administration hospitals in Temple, Waco, and Marlin.

The Texas A&M program allows students to complete their MD requirements one or two years sooner than under traditional medical programs because they start their medical training while still undergraduates.

The students

Students comprising the College of Medicine's charter class average two years younger than the national norm for beginning medical students and rank higher scholastically.

Fourteen of the accepted students completed their sophomore year this last spring, while 16 were in their junior year and two were seniors.

Women comprise 21% of the class.

All of the students selected are Texans, with more than a quarter of the class coming from non-metropolitan areas throughout Texas.

William E. Ward, the college's associate dean for student affairs, said the high percentage of non-metropolitan students is viewed as an encouraging sign that a significant number of them may choose to practice medicine in smaller communities.

Helping to provide doctors for non-

urban areas is one of the objectives of the Texas A&M medical school, Dr Ward said.

Almost half of the students selected for the charter class are from the Houston area.

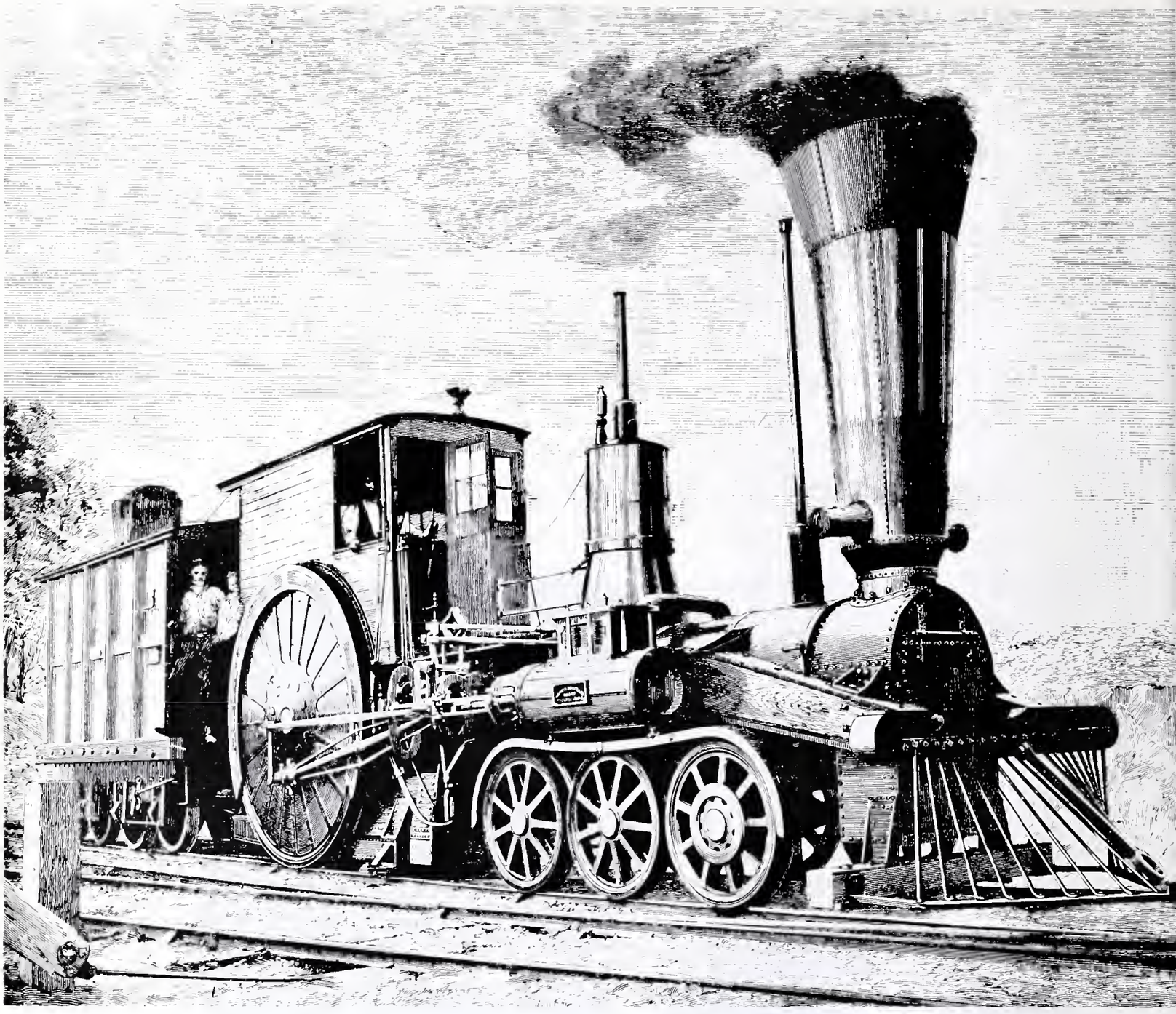
Acting dean

Elvin E. Smith, PhD, will serve as acting dean of Texas A&M's College of Medicine pending selection of a successor for James A. Knight, who resigned effective Oct 1 to accept his new position in psychiatry at the Louisiana State University Medical Center in New Orleans.

Dr Smith has served as associate dean for the past year. Also he served the Texas A&M medical faculty in 1975 as director of the program in physiology. He came to Texas from the University of Mississippi School of Medicine, where he served as professor of physiology and biophysicians.

William D. Mayer, MD, assistant chief medical director for academic affairs of the veterans administration, addresses the Convocation of the Texas A&M University College of Medicine Oct 14 in College Station.

Edmund D. Pellegrino, MD, professor of medicine and president of the Yale-New Haven Medical Center at Yale University, gives the convocation address at ceremonies at the Texas A&M University College of Medicine Oct 14 in College Station.



See The Motorcycle ?

You may not find a motorcycle in this picture, but you'll find plenty of them on Texas' streets and highways.

The trouble is, not enough automobile drivers are seeing motorcycles when they should. Not until it's too late, anyway.

Maybe if motorcycles were as big as trains, you'd be more careful when you see them. But nothing is bigger than human life. And that's what we're really asking you to look out for.

CycleSafe

The Governor's Office of Traffic Safety

MEDICINE AND THE LAW

INFORMED CONSENT

There has been a marked increase in informed consent litigation against physicians in the past years.

Courts have stated that physicians have a duty to make a reasonable disclosure to a patient of risks of the medical diagnosis and treatment. This duty is based on the patient's right to information adequate to exercise an informed consent or refusal of the procedure.

When a patient testifies at a trial that a procedure performed was unauthorized, the physician is often asked to convince the jury that the patient's consent was obtained to avoid liability.

Proof of consent becomes extremely important when a patient is dissatisfied with the result of a procedure and decides to seek legal redress for real or imagined wrongs.

If the physician and patient agree on the content of the disclosure made, the question becomes whether the disclosure was sufficient for the patient to understand the nature of the choices available and the risks and consequences of the proposed procedure.

However, in most informed consent cases there is not agreement on content, and the context surrounding the patient's expression of consent becomes the issue.

Consent and proof of consent

Consent and proof of consent are different matters. Oral consent, when proved, is legally effective; however, it is often difficult to prove. For evidence purposes, the use of consent forms has become a routine practice in many, but not all, hospitals. If a signed consent form is introduced as evidence, the patient must persuade the jury that either the signature on the form was not his or that the consent process was defective.

Written consent by the patient may not be sufficient to protect the physician from liability if the patient did not understand the essential nature of the choices available and the risk and consequences of the procedure.

The physician's common law responsibility is to provide the patient with sufficient information for the patient to make an informed judgment.

Four principal factors in determining the doctor's duty to disclose are the nature or degree of the risk, harm or adverse result; the frequency or percentage of cases in which such risk, harm, or adverse result is seen; the probable effect of the procedure or treatment on the patient's health or well-being; and the probable effect of disclosure of the risks on the patient's mental health or well-being.

Objective and subjective tests

Two inconsistent judicial standards, objective and subjective tests, have been used to determine if a disclosure to a patient is sufficient.

The objective test assumes that disclosure to patients is part of medical practice and that a physician should provide certain basic information about a particular procedure to the patient unless the patient is a minor, mentally incompetent, or the physician feels that the full disclosure would have a detrimental effect on the patient's health. If a physician is able to show that information consistent with that given by other competent physicians in the community was given, the patient cannot recover, even if he was not informed of certain risks which eventually materialized.

The subjective test requires only that the patient persuade the jury that consent would have been withheld had the physician provided certain information describing a risk or consequence that materialized.

Under the subjective test, the physician could be liable even though the risk that materialized was very remote and ordi-

narily was not discussed when consent was obtained.

Thus, the patient is in a substantially better position if the subjective rather than the objective test is used.

The objective test is accepted in most states including Texas. The Texas Supreme Court has stated that the "plaintiff has the burden to prove by expert medical evidence what a reasonable medical practitioner of the same school and same or similar community under the same or similar circumstances would have disclosed to his patient about the risks incident to a proposed diagnosis or treatment, that the physician departed from that standard, causation, and damages. The action is one of malpractice for a failure to conform to medical standards in obtaining the patient's consent."[1]

Study commission proposal

Physicians have become increasingly concerned with the necessity to inform patients of all significant risks and alternatives which may be material to a patient's decision whether to undergo certain medical or surgical procedures. Some physicians are faced with refusals of patients to undergo therapy or tests which the physician believes to be necessary or useful.

Recognizing problems with informed consent, the Texas Medical Professional Liability Study Commission to the 65th Legislature recognized that it could be regarded as advisable to develop a workable system by statute that would insure that a patient has enough information to choose between two or more acceptable means of treatment in proper cases.

The 65th Session of the Texas Legislature enacted a modified version of the Commission's proposal. This is covered in HB 1048,[2] which creates the Texas Medical Disclosure Panel.

The statute explains that in a suit against a physician or health care provider in a health care liability claim based on the failure to disclose or adequately disclose the risks and hazards involved in the medical or surgical procedures, the only theory on which recovery may be had is that of negligence in failing to disclose the risks or hazards that could have influenced a reasonable person in making a decision to give or withhold consent.

The law creates the Texas Medical Disclosure Panel to determine which risks and hazards related to medical and surgical procedures must be disclosed by physicians to their patients and to establish the general form and substance of such disclosures.

The panel is a part of the Texas Department of Health and is composed of nine members, three licensed to practice law and six licensed to practice medicine. The panel members are selected by the Texas Commissioner of Health.

The meetings of the panel are to be held at the call of the chairman or on petition of at least three members, and employees of the Department of Health provide staff support.

The panel is to identify and make a thorough examination of all medical treatments and surgical procedures in which physicians may be involved in order to determine which of those treatments and procedures do and do not require disclosure of the risks and hazards to the patient.

Separate lists of those procedures and treatments that do not require disclosure and those which do require disclosure will be compiled by the panel.

After the lists have been published, before a patient gives consent to any medical care that appears on the panel's list requiring disclosure, the physician must disclose to the patient the risks and hazards involved in the procedure.

The physician must give the disclosure in writing, signed by the patient or a per-

competent witness. The consent must state the risks and hazards that are involved in the medical care and to the degree required by the Texas Medical Disclosure Panel.

In a suit against a physician based on the negligent failure of the physician to disclose the risks and hazards involved in the medical care, both disclosure required and failure to disclose based on the Texas Medical Disclosure Panel's list for which disclosure is not required shall be admissible in evidence.

The failure to disclose the risk and hazards involved in any medical care required to be disclosed as a duty of the physicians is also admissible into evidence.

If medical or surgical procedure is rendered with respect to which the panel has made no determination either way regarding a duty of disclosure, the physician or health care provider is under the duty otherwise imposed by law.

Panel members

The Texas Commissioner of Health has appointed the following members to the panel: Ronald C. Jones, MD, Dallas; James H. Duke, Jr, MD, Houston; Drue O. D. Ware, MD, Fort Worth; John D. Bonnet, MD, Temple; Richard E. Leigh, Jr, MD, Houston; and Mickie Holcomb, DO, El Paso. The attorney members are Mark Martin, Dallas; James Mark McLaughlin, San Angelo; and Lloyd Lochridge, Austin.

Conclusion

The theory behind informed consent is that the patient has the right to know the facts affecting medical risks and that the physician should provide some guidance in assisting the patient.

The guiding principle should be of doing what is best for the patient in instances where disclosure would be calculated to cause reasonable people to alter their consent on which choice of alternatives are available or to give or withhold consent.

Perhaps the legislation has provided a system in which litigation over informed consent can be avoided or reduced.

The Commission will need the help and assistance of the physicians, attorneys, and public to properly discharge its responsibilities.

Ace Pickens
Brown, Maroney, Rose, Baker & Barber
TMA Legal Counsel

---

[1]*Wilson V Scott,* 412 SW2d 299 (Tex 1967)
[2]Chapter 817 (HB 1048), Acts of 65th Legislature; V.A.T.S., Art. 4590i

BEVERLY HILLS HOSPITAL
BEVERLY HILLS CLINIC

PSYCHIATRY
INPATIENT-OUTPATIENT
DEPARTMENT OF ADOLESCENT PSYCHIATRY

A Private 82 bed psychiatric hospital located in Oak Cliff on 18 acres amidst natural wooded surroundings. A multi-approach treatment center of neurologic and all psychiatric disorders. Treatment modalities include Somatic Therapy, Milieu Therapy, Chemotherapy, Individual and Group Therapy and Behavior Modification. Complete facilities for OT-RT under the direction of trained personnel. An individually directed program based on full diagnostic evaluation and actual performance administered by a staff skilled in special education and problems of the adolescent and young adult.

PSYCHIATRY

Jackson H. Speegle, M.D.
Fred H. Jordan, M.D.
Joseph H. Lindsay, M.D.
John T. Holbrook, M.D.

PSYCHOLOGY

George R. Mount, Ph.D.
Tom I. Payton, M.S.
Patrick R. Barnes, M.S.

DIRECTOR OF NURSES
Nita Ivey, R.N.

SOCIAL SERVICES
Beth Rutherford, M.S.W.

COURTESY STAFF

DIRECTOR OF EDUCATION
William E. Nix, Ph.D.

O.T. AND R.T. THERAPY
Director
Chequita Dian Badger, B.S.

1353 N. WESTMORELAND AVENUE, DALLAS, TEXAS 75211 **214 331-8331**

KELSEY-SEYBOLD CLINIC

TEXAS MEDICAL CENTER • 6624 FANNIN STREET • HOUSTON, TEXAS 77030 • AC (713) 797-1551

INTERNAL MEDICINE

Allergy
C. W. Ewing, M.D., F.A.C.A.
S. Weakley, M.D.

Arthritis and Rheumatic Diseases
J. W. Kemper, M.D., F.A.C.P.
M. S. Fischer, M.D.

Cardiology
E. F. Beard, M.D., F.A.C.P.
D. D. Goulden, M.D.
M. J. Mihalick, M.D.

Endocrine and Metabolic Diseases
M. P. Kelsey, M.D., F.A.C.P.
A. E. Leiser, M.D., F.A.C.P.
P. K. Champion, Jr., M.D., F.A.C.P.

Gastrointestinal Diseases, Endoscopy
J. R. Kelsey, Jr., M.D., F.A.C.P.
P. S. Bentlif, M.D., F.A.C.P.
R. D. Eichhorn, M.D., F.A.C.P.
F. S. O'Neil, M.D., F.A.C.P.
J. W. McBee, M.D., F.A.C.P.

General Internal Medicine
G. E. Burke, M.D.
C. F. Taboada, M.D., F.A.C.P.
N. H. Nauert, Jr., M.D.
G. G. Bourianoff, M.D.
G. Crofoot, M.D.

Hematology
J. B. Bart, M.D., F.A.C.P.

Infectious Diseases
S. Riggs, M.D., F.A.C.P.

Nuclear Medicine
D. E. Mouton, M.D., F.A.C.N.M.

Oncology
E. N. Root, M.D.

Pulmonary Diseases, Bronchoscopy
S. P. Fischer, M.D., F.A.C.P.
B. D. Walker, M.D.

DERMATOLOGY

W. M. Fraser, M.D., F.A.A.D.
D. W. Owens, M.D., F.A.A.D.

GENERAL & THORACIC SURGERY

Surgical Endoscopy & Colonoscopy
W. D. Seybold, M.D., F.A.C.S.
J. D. McMurrey, M.D., F.A.C.S.
J. L. Doggett, M.D., F.A.C.S.
M. F. Appel, M.D., F.A.C.S.

OBSTETRICS & GYNECOLOGY

M. L. Cody, M.D., F.A.C.S., F.A.C.O.G.
W. A. Johnson III, M.D., F.A.C.O.G.
A. G. Guette, M.D.

OCCUPATIONAL & PREVENTIVE MEDICINE

M. B. Johnston, M.D., F.A.C.Pr.M.
W. B. Dye, M.D., F.A.C.Pr.M.
H. B. Elwell, Jr., M.D.
R. M. Fenno, M.D., F.A.C.P.
F. A. Goss, M.D.
W. R. Hawkins, M.D., F.A.C.Pr.M.
W. R. Heln, M.D., F.A.C.Pr.M.
L. A. Herrmann, M.D.
G. F. Kelly, M.D., F.A.C.Pr.M.
C. A. Owen, M.D., F.A.C.S.
B. W. Prior, M.D., F.A.C.Pr.M.
N. A. Tadros, M.D., F.A.C.Pr.M.
A. M. Wyss, M.D., F.A.C.Pr.M.
R. J. Huebner, M.D.
T. K. Lee, M.D., M.P.H.

OPHTHALMOLOGY

H. E. Wahlen, M.D., D.A.B.O.
J. E. Key, II, M.D., D.A.B.O.

ORTHOPEDIC SURGERY

R. A. Fulford, M.D., F.R.C.S. (C)
T. H. Crouch, M.D., F.A.C.S.

OTOLARYNGOLOGY

J. C. Dickson, M.D., F.A.C.S.
J. L. Smith, M.D., F.A.C.S.
L. P. Conrad, M.D.

PATHOLOGY

R. A. Jordan, M.D., F.A.S.C.P.

PEDIATRICS

Rheumatology
E. J. Brewer, Jr., M.D., F.A.A.P.

Allergy and Pulmonary Diseases
C. W. Ewing, M.D., F.A.A.P.

Gastroenterology
G. D. Ferry, M.D., F.A.A.P.

General Pediatrics and Consultation
F. J. Boland, M.D., F.A.A.P.
R. M. Thaller, M.D., F.A.A.P.
K. C. Pinckard, M.D.

PSYCHIATRY

C. G. Cochran, M.D.
R. Daichman, M.D.

RADIOLOGY

R. J. Kurth, M.D., F.A.C.R.
E. G. Linares, M.D.
P. Raphael, M.D.

UROLOGY

D. W. Pranke, M.D., F.A.C.S.

DENTISTRY

J. W. Orr, D.D.S.
D. L. McClung, D.D.S.

SPEECH PATHOLOGY & AUDIOLOGY

D. R. Fox, Ph.D.
J. W. Porter, M.A.
N. Shulak, M.A.

EXECUTIVE DIRECTOR

J. A. Bakken, F.A.C.M.G.A.

K-S WEST
1111 Augusta Drive
Houston, Texas 77057
(713) 780-1661

K-S DOWNTOWN
Two Houston Center, Suite P-310
909 Fannin Street, Houston, Texas
77002 (713) 654-4401

Medical Newsmakers

EDWARD SALTZSTEIN, MD, is the new professor and associate chairperson for the Department of Surgery at Texas Tech University School of Medicine Regional Academic Health Center in El Paso. Dr Saltzstein, director of surgical services at R. E. Thomason General Hospital in El Paso, is a member of the American College of Surgeons and the Central Surgical Association.

Two of the three Americans sharing the Nobel Prize in medicine are DR ROGER GUILLEMIN, Baylor College of Medicine professor of physiology from 1953 to 1970, and DR ANDREW SHALLY, postdoctoral fellow and assistant professor at Baylor from 1957 to 1962. Dr Guillemin, presently dean of the Salk Institute, discovered a hormone produced by the brain and spent years of research at Baylor. Dr Shally is now professor at Tulane and senior medical investigator at New Orleans' Veterans Administration Hospital.

CHARLES A. COLTMAN, JR, MD, a specialist in hematology-oncology, has joined the faculty of The University of Texas Health Science Center at San Antonio as associate professor of medicine. Dr Coltman has served as chief of the hematology-oncology service at Wilford Hall USAF Medical Center, military consultant in hematology to the Surgeon General of the Air Force, and is medical director of the Cancer Therapy and Research Center. He is a diplomate of the American Board of Internal Medicine, certified in both hematology and medical oncology, immediate past president of the American Cancer Society, Bexar Metro unit, and is a director of the Texas Division.

WARREN J. RAYMER, MD, Houston, is the new treasurer of the American Association for Clinical Immunology and Allergy.

BILL LEE HALBERT, MD, Teague, has been appointed a member of the Board of Vocational Nurse Examiners of Texas.

TITO CAVALLO, MD, has assumed the position of professor in the department of pathology at The University of Texas Medical Branch and will head the renal immunopathology division in the department. Dr Cavallo is a member of the International Academy of Pathology, the American and the International Societies of Nephrology, the Blood Vessel Club, the American Association of Pathologists, and the American Association for the Advancement of Science.

The Group for Research in Pathology Education (GRIPE) has elected JOYCE DAVID, MD, director of pathology at the Texas A & M University College of Medicine, as president; WILLIAM HOLADAY, MD, of the pathology department at The University of Texas Health Science Center at San Antonio, as vice-president; and LORAINE E. SCHULTZ, MD, professor of pathology at Texas Tech University School of Medicine, as secretary-treasurer.

JEAN MOBLEY, CMA-AC (Certified Medical Assistant-Administrative/Clinical), Lubbock, has been elected vice-president of the American Association of Medical Assistants. Miss Mobley, medical assistant to JOHN H. SELBY, MD, Lubbock, handles administrative responsibilities and gives assistance with professional papers. She is disaster chairman and a member of the board of directors of the local American Red Cross chapter.

SAM NIXON, MD, Floresville, has been reelected speaker of the Congress of Delegates of the American Academy of Family Physicians. Dr Nixon is chairman of the TMA Council on Communication.

BERNARD K. WEINER, MD, San Antonio, has been selected by the State of Israel, under the auspices of the San Antonio Israel Bond Committee, to receive the Maimonides Award in recognition of his devotion to the congregation, community and

Charles A. Coltman, Jr, MD

Tito Cavallo, MD

Israel. Dr Weiner is chief of staff of the Methodist Hospital.

The Texas Health Care Medical Directors Association has elected CARL F. PAGE, MD, Lubbock, president; PEARL ZINK, MD, San Antonio, vice-president; and PATRICK PAPPAS, MD, Lubbock, secretary-treasurer.

MARCUS M. KEY, MD, University of Texas School of Public Health, Houston, has been appointed a member of the US Department of Labor National Advisory Committee on Occupational Safety and Health.

Luther B. Travis, MD

The Department of pediatrics at Texas Tech University School of Medicine will be chaired by MARY ANN SOUTH, MD. A pediatric immunologist, Dr South is noted for her work with Houston's "Bubble Baby." She has served on the Advisory Committee of the Clinical Research Centers for the Department of Health, Education and Welfare and on the Council for the Society for Pediatric Research. She is a member of the American Association of Immunologists, the Infectious Diseases Society of America, the Association of Women in Science, the American Association of University Professors, and the American Medical Women's Association.

Bromley S. Freeman, MD

The new president of the American Society of Clinical Pathologists is VERNIE A. STEMBRIDGE, MD. Dr Stembridge is chairman of the department of pathology at the University of Texas Southwestern Medical School in Dallas.

BASIL A. PRUITT, JR, MD, Fort Sam Houston, has been re-elected recorder of the American Association for the Surgery of Trauma. Dr Pruitt is commander and director of the USA Institute of Surgical Research at Brooke Army Medical Center.

Maj Gen Spurgeon Neel, MD

LUTHER B. TRAVIS, MD, professor of pediatrics at The University of Texas Medical Branch at Galveston, has been elected to serve a six-year term as a councilor of the International Pediatric Nephrology Association. Dr Travis is a member of the board of directors and chairman of the committee on patient education of the American Diabetes Association and a member of the American Federation for Clinical Research and Southern Society for Pediatric Research. He is a member of the board of directors of the American Society of Nephrology, South Texas Diabetes Association, and the National Kidney Foundation.

The director of the new Nutrition Center at The University of Texas Health Science Center at Houston is GEORGE KERR, MD. Dr Kerr is professor of nutrition at UT Health Science Center School of Public Health.

JOSEPH CARL GABEL, MD, has joined the department of anesthesiology at The University of Texas Medical Branch at Galveston as professor and vice-chairman. Dr Gabel will serve as director of research in the department. He is chairman of the committee on acute medicine of the American Society of Anesthesiologists and a member of the American Medical Association, American Heart Association, American Thoracic Society, American College of Chest Physicians, Society for Critical Care Medicine, Southern Medical Association, and the Association of University Anesthesiologists.

BROMLEY S. FREEMAN, MD, a piastic surgeon from Houston, has received the Alumni Medallion at homecoming ceremonies at The College of William and Mary. Dr Freeman serves on the faculties of the Baylor College of Medicine and The University of Texas Medical School at Houston, and holds visiting professorships in ten universities. He was named "Clinician of the Year" in 1977 by the Society of Plastic Surgeons.

MAJ GEN SPURGEON NEEL, MD, the first officer to head the US Army Health Services Command established at Fort Sam Houston, has announced his retirement after 35 years of military service. Gen Neel was named to the Army Aviation Hall of Fame in 1976 and was honored as the "Father of Army Aviation Medicine."

Medicine in literature

EDITOR'S NOTE: This month's bibliography, prepared by TMA's Library staff, lists publications related to bypass surgery for obesity. These and other publications pertaining to this topic are available from the Memorial Library.

BYPASS SURGERY FOR OBESITY

Baddeley RM: Results of jejuno-ileostomy for gross refractory obesity. *Br J Surg* 63:801-806, October 1976.

Benfield JR, Greenway FL, Bray GA, et al: Experience with jejunoileal bypass for obesity. *Surg Gynecol Obstet* 143(3):401-410, 1976.

Bray GA, Barry RE, Benfield JR, et al: Intestinal bypass operation as a treatment for obesity. *Ann Intern Med* 85:97-109, July 1976.

Buchwald H, Schwartz MZ, Varco RL: Surgical treatment of obesity. *Adv Surg* 7:235-255, 1973.

Buchwald H, Varco RL, Moore RB, et al: Intestinal bypass procedures. Partial ileal bypass for hyperlipidemia and jejunoileal bypass for obesity. *Curr Probl Surg:1-51*, April 1975.

Campbell JM, Hunt TK, Karam JH, et al: Jejunoileal bypass as a treatment of morbid obesity. *Arch Intern Med* 137:602-610, 1977.

Current status of jejuno-ileal bypass for obesity. *Nutr Rev* 32(11):333-336, 1974.

Faloon WW: Ileal bypass for obesity: postoperative perspective. *Hosp Pract* 12(1): 73-82, 1977.

Gaspar MR, Movius HJ, Rosental JJ, et al: Comparison of Payne and Scott operations for morbid obesity. *Ann Surg* 184(4): 507-515, 1976.

Harmon JW, Aliapoulos M, Braasch JW: The excluded small-bowel segment; a source of complications after small-bowel bypass. *Arch Surg* 111:953-954, September 1976.

Intestinal bypass surgery for obesity. *Nutr Rev* 33(3):78-80, 1975.

McKenzie R, Figallo EM, Tantisira B, et al: Anesthesia for jejunoileal shunt: review of 88 cases. *Anesth Analg* 54(1):65-70, 1975.

Soterakis J, Glennon JA, Ishihara AM, et al: Pulmonary function studies before and after jejunoileal bypass surgery. *Am J Dig Dis* 21(7):553-556, 1976.

Spanier AH, Kurta RS, Shibata HR, et al: Alterations in body composition following intestinal bypass for morbid obesity. *Surgery* 80(2):171-177, 1976.

Teitelbaum SL, Halverson JD, Bates M, et al: Abnormalities of circulating 25-OH Vitamin D after jejunal-ileal bypass for obesity; evidence of an adaptive response. *Ann Intern Med* 86:289-293, 1977.

Wise L, Boucher JK, Feutz E: Intussusception following jejunoileal bypass: case report and review of the literature. *Am Surg* 42: 346-349, 1976.

Yale CE: End-to-end jejunoileal bypass for morbid obesity. *Wisc Med J* 75:S54-58, July 1976.

IN THE TMA LIBRARY

American Heart Association: *Exercise Testing and Training of Apparently Healthy Individuals: A Handbook for Physicians.* Dallas, American Heart Association, 1972.

American Heart Association: *Exercise Testing and Training of Individuals with Heart Disease or at High Risk for its Development: A Handbook for Physicians*. Dallas, American Heart Association, 1975.

American Hospital Association: *Comparative Statistics on Health Facilities and Population, Metropolitan and Nonmetropolitan Areas*. Chicago, American Hospital Association, 1977.

American Pharmaceutical Association: *Handbook of Nonprescription Drugs,* ed 5. Washington, DC, American Pharmaceutical Association, 1977.

Delaat ANC: *Primer of Serology*. Hagerstown, Md, Harper & Row, 1976.

Dreisbach RH: *Handbook of Poisoning: Diagnosis and Treatment,* ed 9. Los Altos, Calif, Lange Medical Publications, 1977.

Fain TG, Plant KC, Milloy R (eds): *National Health Insurance*. New York & London, RR Bowker Co, 1977.

Fuchs VR: *Who Shall Live? Health, Economics, and Social Choice*. New York, Basic Books, Inc, 1974.

Hastings P: *Medicine, An International History*. New York, Praeger Publishers, 1974.

Johnson DB (ed): *Blood Policy: Issues and Alternatives*. Washington, DC, American Enterprise Institute for Public Policy Research, 1977.

McKusick VA: *Heritable Disorders of Connective Tissue,* ed 4. St Louis, CV Mosby Co, 1972.

Remington's Pharmaceutical Sciences, ed 15. Easton, Pa, Mack Publishing Co, 1975.

Riccardi VM: *The Genetic Approach to Human Disease*. New York, Oxford University Press, 1977.

Schoen LA (ed): *The AMA Book of Skin and Hair Care*. Philadelphia, JB Lippincott Co, 1976.

Shephard TH: *Catalog of Teratogenic Agents,* ed 2. Baltimore, Johns Hopkins University Press, 1976.

Sloane RM, Sloane BL: *A Guide to Health Facilities, Personnel and Management,* ed 2. St Louis, CV Mosby Co, 1977.

Warner DC (ed): *Toward New Human Rights: The Social Policies of the Kennedy and Johuson Administrations*. Austin, Tex, Lyndon B. Johnson School of Public Affairs, 1977.

*White BB: *Falling Arches, The Case Against Federal Intervention in the Practice of Medicine*. Hicksville, NY, Exposition Press, 1977.

Wilson JG, Fraser FC (eds): *Handbook of Teratology, General Principles and Etiology*. New York, Plenum Press, 1977.

**Member of Texas Medical Association.*

IN THE FILM LIBRARY

Acne: Pathogenesis and Treatment, slide presentation produced by American Academy of Dermatology. Evanston, Ill, American Academy of Dermatology, 1977.

Breast Cancer, slide presentation produced by Rosemond GP, Maier WP. New York, Medcom, 1974.

Breast Cancer Detection Through Mammography, slide presentation produced by Gold RH. New York, Medcom, 1973.

Carcinoma of the Corpus Uteri, Part I: Epidemiology, Pathology, and Staging, slide presentation produced by Nuffield Department of Obstetrics and Gynaecology, The University of Oxford. Wallingford, Conn, PreTest Service, 1976.

Carcinoma of the Corpus Uteri, Part II: Diagnosis and Treatment, slide presentation produced by Nuffield Department of Obstetrics and Gynaecology, The University of Oxford. Wallingford, Conn, PreTest Service, 1976.

Deaths

T.A. Andrews, MD

Tom Adam Andrews, MD, a retired urologist, died Oct 16, 1977 in Houston.

Dr Andrews, 73, had lived in Houston since 1928. A native of Westpoint, Dr Andrews graduated from The University of Texas in 1924 and received his medical degree from The University of Texas Medical Branch, Galveston, in 1928. He was a commander in the Medical Corps of the US Navy during World War II.

His professional memberships included the American Medical Association; Harris County Medical Society; and South Central Section, American Urological Association.

Dr Andrews also was a member of the First Baptist Church of Houston, the Houston Lodge No. 1189 A.F. & A.M. Ruthven Commandry No. 2, and Knights Templar Arabia Temple Shrine.

Surviving Dr Andrews are his wife, Ida G. Andrews, Houston; sons, Tom A. Andrews, Jr, Austin, and Giles J. Andrews, MD, Beaumont; sisters, Dulcie Lee Andrews, Austin, and Mrs H. E. Patton, Houston; brothers, John R. Andrews, Austin, and A. Porter Andrews, Temple; and several grandchildren, nephews, and nieces.

W.M. Brook, MD

Winston Marshall Brook, MD, 72, died Oct 4, 1977, in Lampasas.

Dr Brook, co-founder and former president and board chairman of Rollins-Brook Hospital in Lampasas, had been a physician and surgeon for 40 years.

A native of Collin County, Tex, Dr Brook attended Texas A&M University three years before transferring to Baylor University where he received a BS degree. He received his MD in 1930 from Baylor College of Medicine. After an internship at Methodist Hospital in Dallas, he established his first practice in Cameron, Tex. He moved to Lampasas in 1935.

Dr Brook was a member of the American Medical Association and served two terms as president of the Lampasas-Burnet-Llano County Medical Society. In 1956, he was named a fellow of the International College of Surgeons.

Dr Brook served four terms as mayor of Lampasas in the late 1940s and early 1950s. He was a member of the Lampasas Rotary Club, a 32nd degree Mason and a member of Ben Hur Shrine. He served as senior warden and vestryman at St Mary's Episcopal Church. Dr Brook was honored by the citizens of Lampasas on Feb 12, 1970, which was designated "Dr W.M. Brook Day."

Dr Brook is survived by his wife, Maude Woody Brook, Lampasas; son, Winston Rollins Brook, Chicago; daughter, Joe Ann Vann, Dallas; and two granddaughters.

P.K. Conner, MD

Paul Kerr Conner, MD, an honorary member of Texas Medical Association, died Oct 8, 1977, in Jacksboro, Tex. He was 79 years of age.

Dr Conner had lived in Jacksboro for 41 years. He retired in 1976, ending a medical practice which spanned more than half a century.

The physician was a native of Archer City. He was graduated from Southern Methodist University in 1920 and received his medical degree from The University of Texas Medical Branch at Galveston in 1924. He remained in Galveston for a year as an instructor in anatomy at the medical school. He served as an intern at the Robert B. Green Hospital in San Antonio before returning to Archer City to enter private practice. In 1936, he moved to Jacksboro, where he practiced until his retirement.

Dr Conner was a member of the Wichita County Medical Society and the American Medical Association. He also was a member of Alpha Kappa Kappa medical fraternity.
Surviving Dr Conner are his wife, Ethel Cronovich Conner, Jacksboro; sons, Paul K. Conner, Jr, MD, and Patrick James Conner, both of Dallas; sister, Mrs Faye Bernette, Archer City; and two grandchildren.

E.K. Gill, MD

Earl King Gill, MD, died Dec 7, 1976. He was 74 years of age.
In 1972, Dr Gill retired after more than 40 years of medical practice. He had lived in Corpus Christi, Tex, since 1933. He practiced in San Antonio from 1929 to 1933. He was an EENT specialist and the author of several scientific articles.
Dr Gill was born in Dallas. He attended Texas A&M University, College Station, where he earned eight letters in football, basketball and baseball. Dr Gill was the original twelfth man of Aggieland, a custom carried on by thousands of A&M students for more than a half century. The students traditionally stand at all the A&M football games, ready to go onto the field to help their team, as Dr Gill did in 1922. In 1941, a song entitled "The Twelfth Man" was adopted as the school song at A&M.
Dr Gill graduated in 1924 with a degree in engineering, coached for a year at Greenville, Tex, and then entered Baylor College of Medicine. After graduation from medical school in 1929, he served an internship at what is now Brooke Army Medical Center, Ft Sam Houston, Tex. He undertook postgraduate studies at the New York Eye and Ear Infirmary and New York University.
Dr Gill was elected to honorary membership in Texas Medical Association in 1970. He also was an honorary member of the Nueces County Medical Society, and a member of the American Medical Association and American Academy of Ophthalmology and Otolaryngology. He was a colonel in the Air Force reserve, a member of the Presbyterian church and a fourteenth degree Mason.
Surviving Dr Gill are his niece, Elizabeth Gill Nicholas, Pipe Creek, Tex; and two great-nephews, Charles D. Nicholas, Conroe, Tex, and William Gill Nicholas, Houston.

G.A. King, MD

Gerald Atherton King, MD, an honorary member of Texas Medical Association, died Oct 1, 1977, in Fort Worth. He was 76 years of age.
The physician had practiced in Fort Worth for 32 years. He retired from general family practice in 1974.
A native of San Antonio, Dr King was graduated from the College of Medical Evangelists (now Loma Linda University) in Loma Linda, Calif, in 1931. His residency was at Nix Hospital in San Antonio. Before moving to Fort Worth, he practiced in Smiley, Cuero, and Cleburne.
Dr King was a member of the American Medical Association and a life member of the Tarrant County Medical Society. He was past secretary (1942-1943) and president (1937) of the Dewitt-Lavaca County Medical Society.
He also was a member of the Seventh-Day Adventist Church and the Handley-Meadowbrook Lions Club.
Dr King is survived by his wife, Lila King, Fort Worth; daughter, Mrs Eva Loutzenhiser, Austin; sons, Dr Gerald A. King, Jr, Austin, and C. Lawrence King, Riverside, Calif; sister, Mrs Dorothy E. Kingsbury, San Antonio; brother, Arthur King, San Antonio; and two grandchildren.

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

T.A. ADAMS, JR
Houston, 1903-1977

W.M. BROOK
Lampasas, 1905-1977

P.K. CONNER
Jacksboro, 1898-1977

E.K. GILL
Corpus Christi, 1902-1976

G.A. KING
Fort Worth, 1901-1977

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

TEXAS MEDICAL MEMORIAL LIBRARY FUND
1801 N. Lamar Blvd., Austin, Texas 78701

I enclose the amount of $_____. Given in Memory of _____

Please send remembrance card to:

Name _____

Address _____

City and State _____

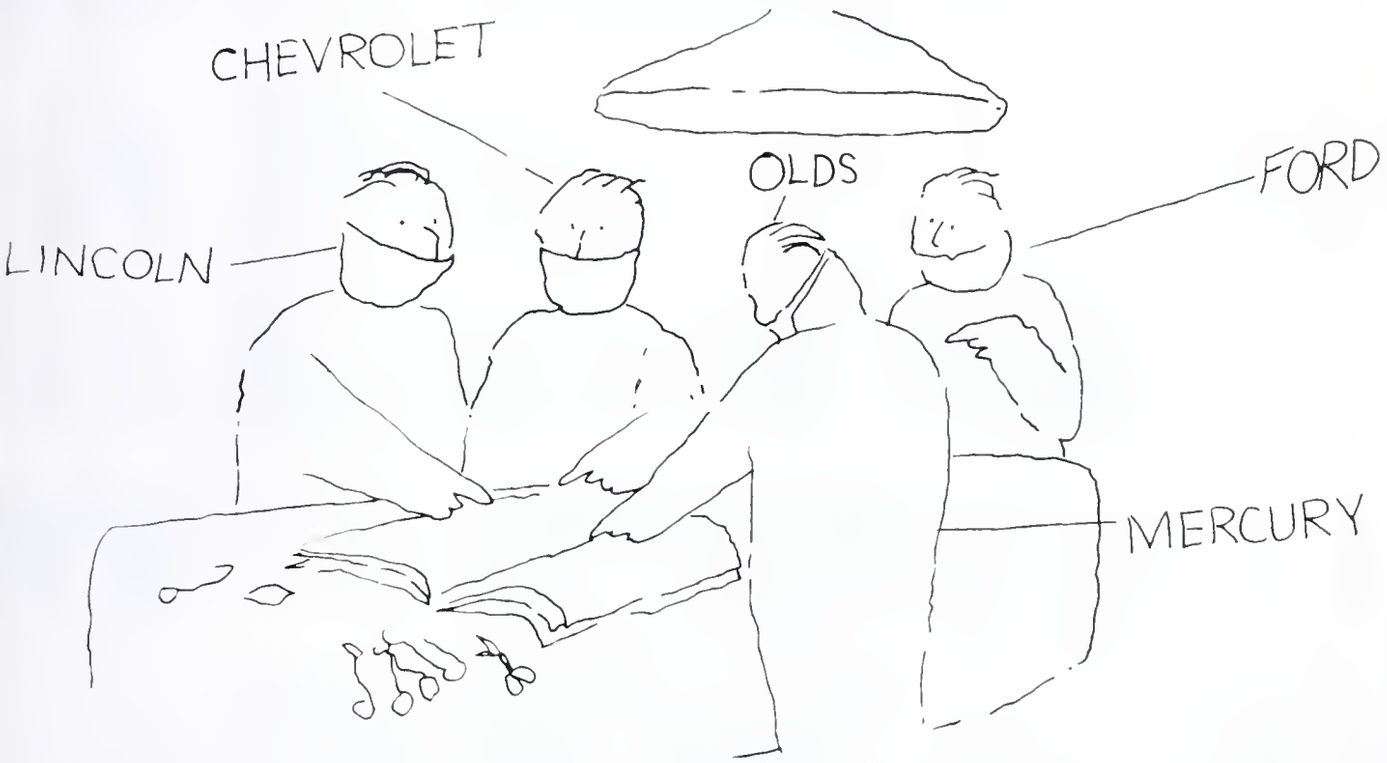
Donor Information:

Name _____

Address _____

City and State _____

The operation is easy when we put our cars on the table.



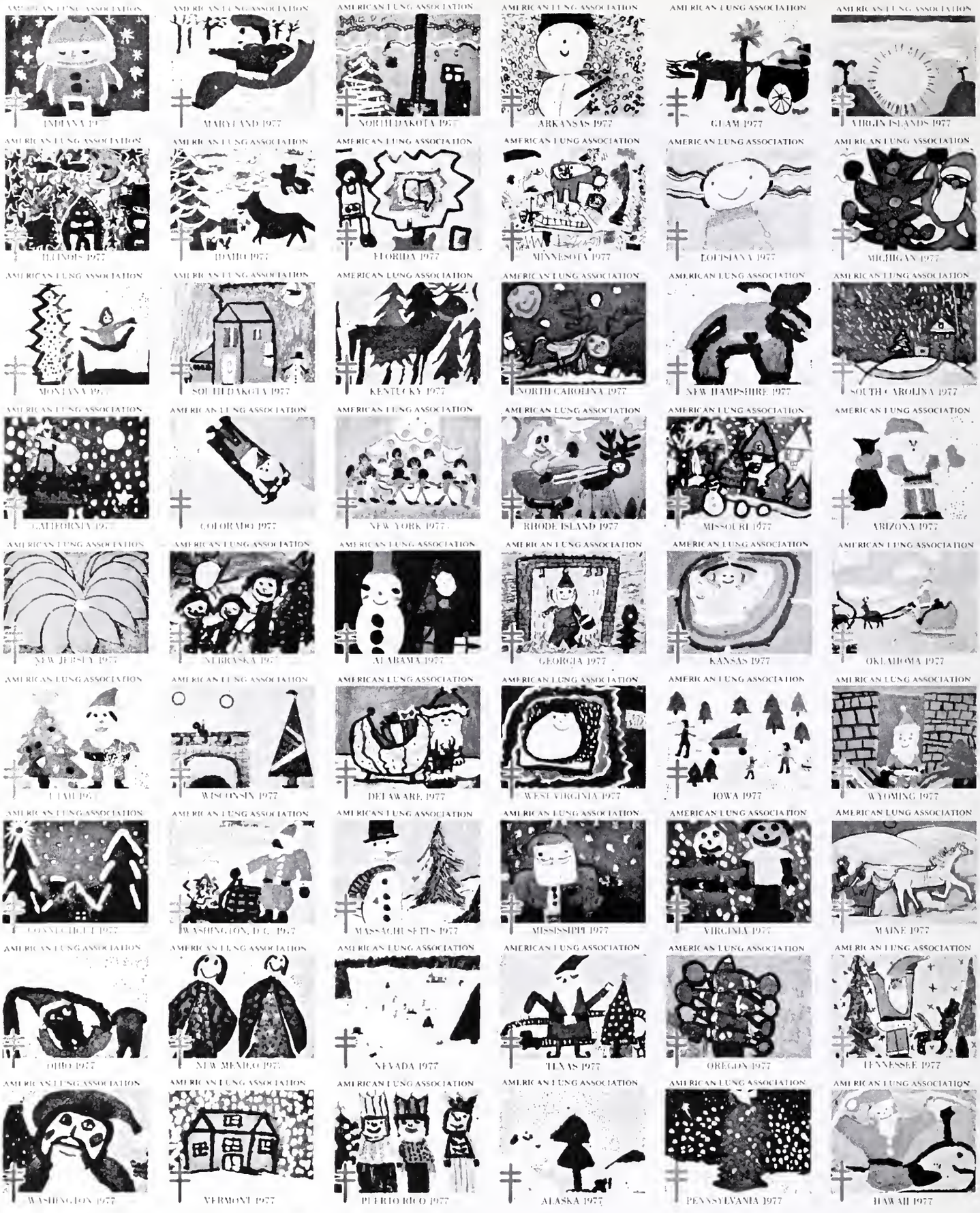
The operation is completely painless. You just tell us the cars you're interested in. Any car, American or foreign. Color brochures with all the information available. Then we'll make all the leasing arrangements. At Southwest Motor Leasing, we lay our cards on the table too. So you know exactly what you're getting. No hidden extras. No surprises.

- Tax write-offs
- Low lease costs
- Positive cash flow
- No record keeping necessary
- Custom tailored leases
- Total maintenance on selected Lincoln-Mercury product lines

Texas Medical Association Automobile Lease Program

Underwritten by:

Bankston Rentals, Inc. • 4747 LBJ Freeway • Dallas, Texas 75234 • 214/233-1441
Southwest Motor Leasing, Inc. • 6737 Southwest Freeway • Houston, Texas 77074 • 713/777-3816



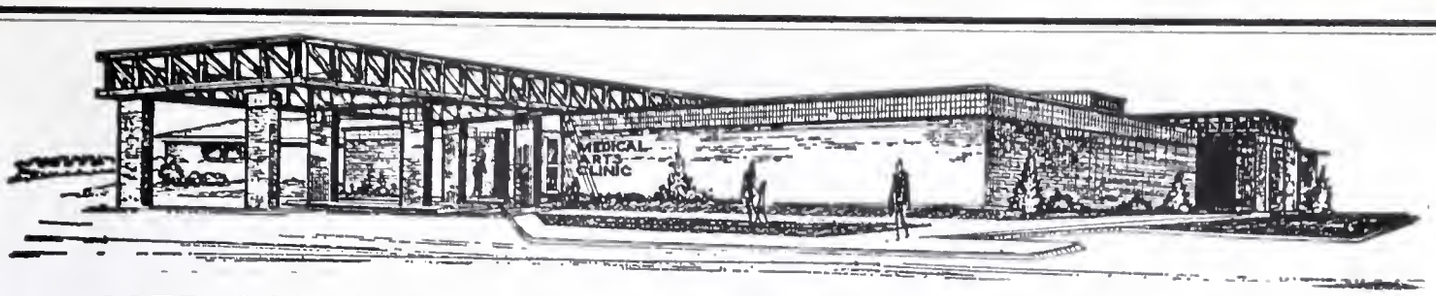
Christmas Seals Fight Lung Disease

AMERICAN LUNG ASSOCIATION

The "Christmas Seal" People

We care about every breath you take

Space contributed by the publisher as a public service



MEDICAL ARTS CLINIC ASSOCIATION of corsicana

ANESTHESIOLOGY
LARRY R. STEVENER, M.D., F.A.C.A.

DERMATOLOGY & SYPHILOLOGY
JOSEPH M. GLICKSMAN, M.D., F.A.A.D.*
J. D. SMITH, M.D., F.A.A.D.*

FAMILY PRACTICE
ENNIS, TEXAS
W. B. KINZIE, MD., D.A.B.F.P.

GENERAL & VASCULAR SURGERY
LOUIS E. GIBSON, M.D., F.A.C.S*
E. SCOTT MIDDLETON, M.D., F.A.C.S.*

GENERAL, VASCULAR & THORACIC SURGERY
ROSS B. REAGAN, M.D.*

INTERNAL MEDICINE
ROBERT D. BONE, M.D., F.A.C.P.*
JAMES F. WITTEN, M.D., F.A.C.P.*
CHARLES I. BILTZ, M.D.*
ALLEN M. JONES, M.D.*
JOHN D. NELSON, M.D.*
L. BRYAN COTTON, JR., M.D.*
KENT ROGERS, M.D.*
JACK B. BANKHEAD, M.D.*

OBSTETRICS & GYNECOLOGY
KELLY PAUL BURKHART, M.D., F.A.C.O.G.*
W. GENE MURFF, M.D., F.A.C.O.G.*
NEAL GREEN, M.D.

OPHTHALMOLOGY
ROBERT D. MERTZ, M.D., F.A.A.O.O.*
WILLIAM E. LAGOMARSINO, M.D., F.A.A.O.O.*

ORTHOPAEDIC SURGERY
JAMES A. DOTSON, M.D.*

PATHOLOGY
MARY G. BANKHEAD, M.D.*

PEDIATRICS
JOHN W. GRIFFIN, M.D., F.A.A.P.*
JAMES E. SPEIER, M.D., F.A.A.P.*
MASON P. GILFOIL, M.D.

EXECUTIVE DIRECTOR
DON L. BOWEN, M.G.M.A.

*DIPLOMATE OF THE AMERICAN BOARD

TRAVIS CLINIC FOUNDATION AND TRAVIS CLINIC ASSOCIATION

JACKSONVILLE, TEXAS 75766

STAFF

General Surgery:
L. L. Travis, M.D., Emeritus
Ken E. Kuykendall, M.D.
E. O. Bonsukan, M.D.

Orthopedic Surgery:
E. L. Mahon, Jr., M.D.

Urology:
H. F. Rives, M.D.
Spencer Kent, M.D.

Pathology:
Harbert Davenport, Jr., M.D.
Jimmy B. Harkins, M.D.

Internal Medicine:
J. T. Boyd, M.D.
F. H. Verheyden, M.D.
J. T. Scogin, M.D.
Mary A. Bone, M.D.
J. A. Armstrong, M.D.
D. B. Turner, M.D.
K. A. Majmundar, M.D.
B. Ruyani, M.D.
Wm. N. Meshel, M.D.

Obstetrics and Gynecology:
J. C. Rucker, M.D.
J. D. Crawford, M.D.

Dermatology:
T. S. Arrington, M.D.

Pediatrics:
M. L. Gray, M.D.
G. Majmundar, M.D.

Radiology and Radioactive Isotopes:
L. W. Ralston, M.D.

Podiatry:
Daniel H. Phelps, D.P.M.

Psychology:
Charles T. Fries, Ed.D.

Business Manager:
Gerald L. Burks

H. E. Eugene Bonham, M.D.

Diplomate American Board of Psychiatry & Neurology

Geraldine M. Bonham, B.A., B.S.N., R.N.

PERSONAL AND FAMILY COUNSELING
ADULT AND CHILD CONSULTATIONS
and
PSYCHOTHERAPY

1200 Summit Ave., Suite 526, Fort Worth, Texas 76102 817 335-3491

Texas Physicians' Directory

DIRECTORY RATES & DATA: Space is available to TMA members at $12.50 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. Section headings are limited to those specialties designated by the American Medical Association. A list of these specialties is available upon request. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Clinics

THE FORT WORTH CLINIC

1221 West Lancaster Avenue, Fort Worth, Texas 76102
Telephone 817 336-7191

INTERNAL MEDICINE
Kendra J. Belfi, M.D.
John M. Church, M.D.
Thomas J. Coleman, M.D.
Robert R. Dickey, M.D.
Ferd E. Garrison, Jr., M.D.
Cortell K. Holsapple, M.D.
John E. Johnson, Jr., M.D.
O. M. (Jack) Phillips, M.D.

GENERAL SURGERY
John H. Sewell, M.D.
Robert L. Sewell, M.D.

ORTHOPEDIC SURGERY
Thomas E. Rapp, M.D.

CONSULTANTS IN RADIOLOGY
Victor E. McCall, M.D.
Dixon Presnall, M.D.
Harry H. Whipp, M.D.

FIFTH AVENUE CLINIC

650 Fifth Avenue, Fort Worth, Texas

MEDICINE
Sidney E. Stout, M.D.
Frank L. Bynum, M.D.
Ed Etier, Jr., M.D.

GENERAL PRACTICE
Donald S. Gibbs, M.D.

RADIOLOGY
Otto H. Grunow, M.D.

MEDICAL ASSOCIATES OF CORPUS CHRISTI, P.A.

1533 South Brownlee, Corpus Christi, Texas 78404
Telephone 883-7411

FAMILY MEDICINE
Travis B. Phelps, M.D., F.A.A.F.P.
T. D. Harvey, M.D., A.B.F.P.
H. R. Rose, M.D., A.B.F.P.
C. L. Vernor, M.D.
Frederick S. Maurer, M.D.

ORTHOPEDIC SURGERY
C. M. Yanez, M.D., F.A.C.S.

INTERNAL MEDICINE
G. A. Reeves, M.D.
Pruett Moore, J., M.D.
Mark G. Strauss, M.D.
James C. Hines, M.D.

EXECUTIVE DIRECTOR
Gene Hybner

DIRECTOR OF NURSES
Pat Parker, R.N.

Remind your colleagues of your specialty and office location.
Purchase a listing in the "Texas Physicians' Directory."

BEELER-MANSKE CLINIC

9th Avenue N. at 5th Street N., Texas City, Texas 77590
Telephone 713 948-8521

INTERNAL MEDICINE
C. M. Maruri, M.D.
A. J. Nodarse, M.D.

GENERAL SURGERY
B. W. Hink, M.D., F.A.C.S.

FAMILY MEDICINE
J. H. Cochrane, Jr., M.D., F.A.A.F.P.
J. W. O'Bryant, M.D.
A. A. Piske, M.D.

FAMILY MEDICINE AND GENERAL SURGERY
Salvador Faus, M.D.

CLINIC MANAGER
Stan M. Sheppard

Complete X-Ray, Physical Therapy and Laboratory Facilities

MALONE AND HOGAN CLINIC

1501 West 11th Place, Big Spring, Texas 79720, Telephone 267-6361

OPHTHALMOLOGY AND OTOLARYNGOLOGY
P. W. Malone, M.D., F.A.C.S.
J. W. Tipton, M.D.
W. B. Allensworth, M.D.

GENERAL SURGERY
C. B. Marcum, M.D., F.A.C.S.
J. E. Mathews, M.D., F.A.C.S.

ORTHOPEDIC SURGERY
C. T. Moore, M.D.

INTERNAL MEDICINE
J. H. Burnett, Jr., M.D.
W. A. Riley, M.D.
R. S. Griffin, M.D.
D. M. Logan, M.D.
V. T. Smith, M.D.

DERMATOLOGY
Merrill M. Cooper, M.D.

OBSTETRICS AND GYNECOLOGY
M. A. Porter, M.D.
J. W. Kuykendall, M.D.

PEDIATRICS
J. M. Woodall, M.D.
B. R. Owen, M.D., F.A.A.P.

RADIOLOGY & NUCLEAR MEDICINE
Buerk Williams, M.D.
A. P. Goswami, M.D.

UROLOGY
J. W. Cowan, M.D.

PODIATRY
Bradford Glass, D.P.M.

PATHOLOGY
B. A. Campomanes, M.D.

CONSULTANT IN ELECTROENCEPHALOGRAPHY
M. L. Proler, M.D.

ADMINISTRATION
R. L. Helth, Administrator

RUGELEY AND BLASINGAME CLINIC

2100 North Fulton Street, Wharton, Texas
Telephone 713 532-1700

ADMINISTRATION
C. H. "Ham" Rugeley
Richard R. Raphael

INTERNAL MEDICINE
R. D. Little, M.D.
D. W. Samuelson, M.D.

GENERAL PRACTICE
C. E. Woodson, M.D.

PEDIATRICS
F. W. Kolle, M.D.

NEUROPSYCHIATRY
R. R. Gleason, Jr., M.D.

GENERAL SURGERY
R. B. Caraway, Jr., M.D.
W. C. Yankowsky, M.D.

UROLOGY
H. Z. Fretz, M.D.

DERMATOLOGY
T. S. Arrington, M.D.

OBSTETRICS & GYNECOLOGY
D. M. Voulgaris, M.D.
H. E. Secor, M.D.

OPHTHALMOLOGY
V. A. Black, M.D.

OTOLARYNGOLOGY
J. L. Holcomb, M.D.

ANESTHESIOLOGY
C. G. Spears, M.D.

DENTISTRY
C. J. Shumbera, D.D.S.
J. R. Kieler, Jr., D.D.S.

PATHOLOGY—CONSULTANT
H. M. Perches, M.D.

RADIOLOGY—CONSULTANT
L. D. O'Gorman, M.D.

DIAGNOSTIC CLINIC OF HOUSTON
6448 Fannin, Houston, Texas 77030
Telephone 713 797-9191

Internal Medicine and Diagnosis

ALLERGY
Arthur T. Pedersen, M.D.

CARDIOVASCULAR DISEASE
Thomas J. Fatherree, M.D.
Hugh F. Arnold, M.D.
Hugh H. Hanson, M.D.
Michael B. Raine, M.D.
Michael A. Modelski, M.D.
Sigmund W. Friedland, M.D.
Bogusiaw Godlewski, M.D.

DERMATOLOGY
Samuel F. Bean, M.D.

ENDOCRINOLOGY AND METABOLIC DISEASES
H. Leland Kaplan, M.D.
Thomas G. Vandivier, M.D.
Raymond L. Gregory, M.D.
R. Frederick Gregory, M.D.
Thomas J. Hanson, M.D.
Richard D. Jablonski, M.D.

GERIATRICS
Frederick G. Dorsey, M.D.

GASTROENTEROLOGY
Dolph L. Curb, M.D.
W. Tom Arnold, M.D.
Belton G. Griffin, M.D.
Frederick R. Lummis, Jr., M.D.
Dean C. Solcher, M.D.
Michael Gagliardi, M.D.

HEMATOLOGY
Edmund N. Gouldin, M.D.
George T. Conklin, M.D.

INFECTIOUS DISEASES
Lewie L. Travis, Jr., M.D.
George Burnazian, M.D.
Benjamin L. Portnoy, M.D.

INTERNAL MEDICINE
Jeffrey Zatorski, M.D.
James V. Ryan, M.D.
Ronald R. Galfione, M.D.

NEPHROLOGY
K. Ronald Bingman, M.D.
R. Robert Durrett, M.D.
Matthew J. Godlewski, M.D.

NEUROLOGY
Donald J. Russell, M.D.
George Isaacs, M.D.
Ernesto Infante, M.D.

ONCOLOGY
Lester L. Hoaglin, Jr., M.D.
Peter Sullivan, M.D.
Harry R. Price, M.D.
Edward L. Middleman, M.D.
Martin J. Hrgovic, M.D.

PATHOLOGY
Paul B. Radelat, M.D.
Ashok M. Balsaver, M.D.

PULMONARY DISEASE
William M. Donohue, M.D.
Joel E. Reed, M.D.
Gene R. Lindley, M.D.
Martin L. Kaplan, M.D.
Louis C. Waddell, Jr., M.D.

RADIOLOGY
William L. Hinds, M.D.
Charles P. Eldridge, Jr., M.D.
David D. Lawrence, M.D.
Charles A. Spain, M.D.
Joe B. Wilson, M.D.
Howard J. Pollock, M.D.

NUCLEAR MEDICINE
Donald A. Podoloff, M.D.

RHEUMATOLOGY
John E. Norris, M.D.

ADMINISTRATION
Robert B. Hall,
Administrator

HOUSTON HEADACHE CLINIC
Park Plaza Professional Building
1213 Hermann Drive, Suite 855
Houston, Texas 77004
(713) 528-1916

Neurology
Ninan T. Mathew, M.D., F.R.C.P.(C)

Allergy

HOUSTON ALLERGY CLINIC
Clinical Allergy and Immunology

Richard L. Etter, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Richard H. Jackson, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
Warren J. Raymer, M.D., F.A.C.A., F.A.A.A., F.A.A.C.I.A.*
D. W. Waddell, M.D., F.A.A.C.I.A.
Ramon Garrido, M.D., F.A.C.A., F.A.A.C.I.A.*
(Certified American Board of Pediatrics)
*Diplomate American Board of Allergy & Immunology

Suite 444, Hermann Professional Building
6410 Fannin St., Houston, Texas 77030, 713 797-0900

PETER B. KAMIN, M.D., P.A.
Certified American Boards of Pediatrics and Allergy
Diplomate American Board of Allergy and Immunology
Allergy and Immunology

Suite 601, Oak Hills Medical Building
7711 Louis Pasteur Drive, San Antonio, Texas 78229
Phone 512 696-4405 or 227-6331

TMA Group Insurance Plans
. . . Another service of your association

McGOVERN ALLERGY CLINIC
Diagnosis and Treatment of Allergic Diseases

JOHN P. McGOVERN, M.D.
Director-Consultant

THEODORE J. HAYWOOD, M.D.
ORVILLE C. THOMAS, M.D.
JOSEPH T. QUENG, M.D.
LAWRENCE G. THORNE, M.D.
K. VENUGOPALAN, M.D.
ROBERT E. SMITH, M.D.
JAMES A. AYERS, M.D.
EUNICE W. CHOU, M.D.
ALBERT LEHMANN, M.D.
GERALD T. MACHINSKI, M.D.

Research Associates
MICHAEL H. SMOLENSKY, Ph.D.
ALAIN REINBERG, M.D., Ph.D.
CALVIN J. McLERRAN, Ph.D.
MICHAEL A. McCORMICK, Ph.D.
GLENNA M. KYLE, M.S.
ITING MAY LU, M.S.

Consultants

EVAN M. HERSH, M.D.
JUDITH H. MARSTON, Ph.D.
Immunology

JAMES A. KNIGHT, M.D.
Psychiatry

HERBERT C. McKEE, Ph.D.
RICHARD K. SEVERS, Ph.D.
Air Pollution

CAROLYN S. LEACH, Ph.D.
Clinical Laboratories

JOHN A. THOMAS, Ph.D.
Clinical Pharmacology

THOMAS D. DOWNS, Ph.D.
Biometrics

WARREN E. SCHALLER, H.S.D.
Allied Health Sciences

Certified American Board of Allergy and Immunology
Diplomates American Boards of Pediatrics and Allergy
6969 Brompton (at Holcombe), Houston, Texas 77025, 713 661-1444

CORPUS CHRISTI ALLERGY CLINIC
Saul Grossman, M.D., F.A.C.A., Allergy-Dermatology
W. A. Crozier, M.D., F.A.C.A., Allergy-Immunology

2530 Morgan, Corpus Christi, Texas, 882-3487

STUART ALAN MASON, M.D., P.A.
Fellow American Association for Clinical Immunology and Allergy
Fellow of the American College of Allergists
Allergic Diseases

921 Eighth Avenue, Fort Worth, Texas 76104
Phone: 336-1574 If no answer: 924-4231

ALLERGY AND IMMUNOLOGY
Joseph T. Sams, M.D., P.A. or C. David Meadows, M.D., P.A.
Diplomates of the American Board of Allergy and Immunology

900 W. Randol Mill Rd., Suite 215, Arlington, Texas 76012, 817 277-1161

CHARLES A. RUSH, JR., M.D.
Diplomate/American Board of Allergy & Immunology
Fellow, A.A.A., A.C.A., A.A.C.I.A.

Northeast Medical Clinic Association
7601 Glenview Drive
Fort Worth, Texas 76118

FREDERICK W. GROVER, M.D. & ASSOCIATES
Diplomate of the American Board of Allergy and Immunology
Allergy and Immunology
Children and Adults
6114 Sherry Lane, Preston Center, Dallas, Texas 75225
Telephone: (214) 363-7790

MEMORIAL LIBRARY
TEXAS MEDICAL ASSOCIATION
1801 North Lamar Blvd., Austin, Texas 78701, 512 477-6704

A clinical library designed to assist the practicing physician

50,000 bound volumes • extensive reprint and periodical collection
• 400 lay and professional films • pathological slide sets
• cassette and reel-to-reel tapes from AMA, Audio Digest
• MEDLINE computer data service

. . . Another service of your association

Colon & Rectal Surgery

ALVIN BALDWIN, JR., M.D.
Diplomate American Board of Colon and Rectal Surgery

R. D. DIGNAN, M.D.
Diplomate American Board of Surgery
Diplomate American Board of Colon and Rectal Surgery

Suite 1209 Barnett Tower, 3600 Gaston Avenue, Dallas, Texas 75246
Telephone 824-2573

HUGH C. WELSH, M.D.
Proctology and Abdominal Surgery

2715 Fannin Street, Houston, Texas

C.D.L. CROMAR, M.D., M.S., F.R.C.S.E., F.R.C.S.C.
Surgery of the Rectum and Colon

Suite 8, 3337 Plainview, Pasadena, Texas 77504

FT. WORTH PROCTOLOGIC CLINIC, P.A.
Colon and Rectal Surgery and Colonoscopy

Sommai Sehapayak, M.D.
Diplomate American Board of Colon and Rectal Surgery

Medical Tower, Suite 210, 1550 West Rosedale,
Fort Worth, Texas 76104, 817-338-4501 (24 hours)

SUVID PITA, M.D.
Colon and Rectal Surgery
Colonoscopy

Barnett Tower, Baylor Medical Plaza
3600 Gaston Ave, Suite 411
Dallas, Texas 75246
Telephone 214 821-4300

MANUEL G. LAGON, M.D., F.A.C.S.
Diplomate American Board of Colon and Rectal Surgery

FORT WORTH COLON AND RECTAL CLINIC, P.A.
Colonoscopy, Colon and Rectal Surgery

909 Eighth Avenue, Fort Worth, Texas 76104; Telephone 332-1371

L. C. PETTA, M.D.
Diplomate American Board of Surgery
Diplomate American Board of Colon and Rectal Surgery

Fiberoptic Colonoscopy
Colon and Rectal Surgery

1550 W. Rosedale, Suite 606, Fort Worth, Texas 76104; 817 336-2971

Dermatology

ROGER W. MANAR, M.D.
Dermatology and Superficial X-Ray Therapy

1400 Eighth Street, Wichita Falls, Texas

DRS. PIPKIN AND RESSMANN
J. Lewis Pipkin, M.D.
Arthur C. Ressmann, M.D.
Dermatology
X-Ray and Radium in the Treatment of Skin Malignancies

714 Medical Arts Bldg., San Antonio, Texas 78205

JOE M. LEHMAN, M.D.
ROBERT LEHMAN, M.D.
A Professional Association
Dermatology, Syphilology, and Cancer of the Skin

3801 19th St., Suite 500, Lubbock, Texas 79410

DAVID R. WEAKLEY, M.D., F.A.C.P.
Dermatology
Treatment of Skin Malignancies

7777 Forest Lane, Suite 214, Dallas, Texas 75230; Phone 661-7460

GERALD A. CASID, M.D., P.A.
Skin Diseases—Skin Tumors
Hair Transplantation, Dermabrasion, Chemical Peels

333 N. Shiloh Rd., Garland, Texas 75042
Phone 214 272-5451

DERMATOLOGY ASSOCIATES OF DALLAS
David S. Alkek, M.D.
Lon E. Rogers, M.D.
Adult and Pediatric Dermatology
Dermatologic Surgery

Medical City II, Suite 2309, 7777 Forest Lane,
Dallas, Texas 75230; Telephone 214 661-7661

WILLIS I. COTTEL, M.D.
Practice Limited to Skin Cancer
Mohs' Chemosurgery

Baylor Medical Plaza, 3600 Gaston Avenue
Suite 1154, Dallas, Texas 75246; 214 827-5960

Endocrinology

ENDOCRINE ASSOCIATES OF DALLAS, P.A.
STANLEY FELD, M.D.
RICHARD SACHSON, M.D.
Practice Limited to Endocrinology

Douglas Plaza Bldg., Telephone: 363-5535
8226 Douglas Avenue, Dallas, Texas 75225

ZAVEN H. CHAKMAKJIAN, M.D.
SAMUEL P. MARYNICK, M.D.
Practice Limited to Endocrinology & Metabolism

3500 Gaston Avenue, Dallas, Texas 75246
Telephone 214 820-2216

Family & General Practice

GLENN C. COATES, M.D.*
GENE V. HAVERLAH, M.D.
EUGENE M. TOKAR, D.D.S.

1303 Hospital Blvd., Floresville, Texas 78114, 512 393-2527

*Diplomate American Board of Family Practice

SAMUEL SILVA, M.D.
Hair Transplantation

4759 South Freeway, Fort Worth, Texas, 817 923-7374

Gastroenterology

CECIL O. PATTERSON, M.D., F.A.C.P.
Gastroenterology, Gastroscopy, Esophagoscopy
1414 Medical Arts Building, Dallas, Texas, 742-6141-44

MILFORD O. ROUSE, M.D., F.A.C.P.
Consultations in hospitals only

DRS. BAILEY, DOUGLAS AND DEVANEY ASSOCIATION
3434 Swiss Avenue, Suite 303, Dallas, Texas
Diseases of the Digestive System
Herbert A. Bailey, M.D.
F. Clark Douglas, M.D.
George T. DeVaney, M.D.
Nisar Ahmed, M.D.

KALMAN NARAYAN, M.D.
Diplomate American Board of Internal Medicine
Gastroenterology, Gastroscopy, Colonoscopy, Polypectomy, E.R.C.P.

909 8th Ave., Suite 7, Ft. Worth, Texas 76104, 817 336-9055

General Surgery

BURT B. SMITH, M.D., F.A.C.S.
Surgery
Emphasizing Breast, Thyroid and Gastro-Intestinal Surgery

728 Hermann Professional Bldg., Houston, Texas 77025, 523-8323

BRYAN V. WILLIAMS, M.D., F.A.C.S.
Diplomate American Board of Surgery
General Surgery

1506 St. Joseph Professional Bldg., Houston, Texas 77002, 227-5505

LeROY J. KLEINSASSER, M.D., F.A.C.S.
Diplomate American Boards of Surgery and Thoracic Surgery
Vascular, General and Thoracic Surgery

Baylor Medical Plaza, 3600 Gaston Avenue,
Dallas, Texas 75246, 821-2356

ROBERT J. TURNER, III, M.D., F.A.C.S.
Diplomate American Board of Surgery
General and Peripheral Vascular Surgery

The Saint Joseph Professional Building
1400 South Main Street, Suite 104
Fort Worth, Texas 76104, 335-8311

ROBERT M. STECKLER, M.D.
Diplomate American Board of Surgery
Head and Neck Surgery, Surgery, and Surgical Oncology

Baylor Medical Plaza, Suite 1008, 3600 Gaston Avenue,
Dallas, Texas 75246, 214 827-9880

ROBERT DAVIS, M.D., M.B., B.Ch. (Rand), F.R.C.S. (Edin.)
General Surgery
430 Park Plaza Professional Building, 1213 Hermann Drive,
Houston, Texas 77004; 713 528-0597
By Appointment

Gynecology

RAYMOND H. ABRAMS, M.D., F.A.C.O.G.
Diplomate American Board of Obstetrics and Gynecology
Gynecological and Reconstructive Surgery

3434 Swiss Avenue, Suite 401, Dallas, Texas 75204
Telephone 214 823-1063

Hand Surgery

L. Lee Lankford, M.D. and Peter R. Carter, M.D.
HAND SURGERY ASSOCIATION
Hand Surgery and Upper Extremity Reconstructive Surgery

Baylor Medical Plaza, Barnett Tower, Suite 802, 3600 Gaston Avenue
Dallas, Texas 75246, 214 823-5351

Neurological Surgery

DALLAS NEUROSURGICAL ASSOCIATION
Neurological Surgery

Casey E. Patterson, M.D.
Charles W. Simpson, M.D.
Morris Sanders, M.D.
Phillip E. Williams, Jr., M.D.
Ira C. Denton, Jr., M.D.
W. Robert Hudgins, M.D.
Jack Woolf, M.D., Consultant

5959 Harry Hines Blvd., St. Paul Professional Bldg., Suite 620,
Dallas, Texas 75235; 214 637-0420

8210 Walnut Hill Lane, Presbyterian Professional Bldg., Suite 905,
Dallas, Texas 75231; 214 369-7596

3600 Gaston Avenue, Barnett Tower, Baylor Medical Plaza, Suite 310,
Dallas, Texas 75246; 214 826-1976

JACK STERN, M.D., F.A.C.S.
GARY C. HUTCHISON, M.D., F.A.C.S.
THOMAS R. BOULTER, M.D., F.A.C.S.
Neurological Surgery

8210 Walnut Hill Lane, Suite 805, Dallas, Texas 75231, 363-8524

RONALD SMITH, M.D.
Neurological Surgery

901 South Lake, Fort Worth, Texas, 336-0551

EL PASO NEUROLOGICAL INSTITUTE
Professional Association
Neurology, Neurosurgery, Electroencephalography
Neuro-Radiology, Physiotherapy

William J. Nelson, M.D., Neurosurgery
John T. O'Neal, M.D., Neurosurgery
Robert D. Schneider, M.D., Neurology and Electroencephalography
Steven K. Crouse, M.D., Neurology and Electroencephalography

Medical Plaza Bldg., Suite 307
El Paso Medical Center
1501 Arizona Avenue, El Paso, Texas 79902
Telephone 915 532-8901

TMA International Travel Program
. . . Another service of your association

CHERRY-LONG NEUROSURGERY ASSOCIATION
GLENN R. CHERRY, M.D., D.A.B.N.S., F.A.C.S.
R. GORDON LONG, M.D., D.A.B.N.S., F.A.C.S.
BENNIE B. SCOTT, M.D.
Neurological Surgery
Baylor Medical Plaza — 605 Barnett Tower
3600 Gaston Avenue — Dallas, Texas 75246
Telephone 214 826-7060

ROBT. C. L. ROBERTSON, M.D., F.A.C.S.
JOSEPH W. ROBERTSON, M.D., F.A.C.S.
E. FLOYD ROBINSON, M.D.
Neurological Surgery
2210 Maroneal, Houston, Texas 77025, 523-3684

TEXAS NEUROLOGICAL INSTITUTE AT DALLAS, P.A.
Neurological Surgery
James E. Bland, M.D.
Martin L. Lazar, M.D.

Medical Neurology, Electroencephalography and Electromyography
Ralph G. Greenlee, Jr., M.D.
Allan L. Naarden, M.D.
Richard R. North, M.D.
William S. Woodfin, M.D.

Neuro-Ophthalmology
Peter R. Bringewald, M.D.

Director, Pain Relief Center and Neuroanesthesiologist
P. Prithvi Raj, M.D.

Consultant in Speech
Josephine Simonson, M.A.

7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

SOUTHWEST NEUROSURGICAL ASSOCIATES
Richard H. Moiel, M.D.
Frank S. Yelin, M.D.
Arthur Evans, M.D.

601 Medical Towers, Houston, Texas 77030; 713 790-0795
7777 Southwest Freeway, #942, Houston, Texas 77074

Nuclear Medicine

NUCLEAR MEDICINE LABORATORIES OF TEXAS
Texas Medical Center
6411 South Main Street, Houston, Texas 77030

Completely Equipped Radioisotope Laboratory for Diagnostic Radioactive Tests In: Hematology, Thyroidology, Endocrinology, Gastroenterology, Cardiology, Neurology, Neurosurgery, Urology, Ophthalmology, Obstetrics-Gynecology and Non-Invasive Nuclear Cardiology

Herbert C. Allen, Jr., M.D., F.A.C.N.M.
Director - 713 790-0540
Diplomate American Board of Nuclear Medicine

HERBERT C. ALLEN, JR., M.D., F.A.C.N.M.
Practice Limited to Nuclear Medicine

100 Hermann Professional Bldg., Houston, Texas 77030; 713 790-0540

Diplomate American Board of Nuclear Medicine

Occupational Medicine

Eric G. Comstock, M.D.
Diplomate American Board of Medical Toxicology

OCCUPATIONAL TOXICOLOGY
1802 Medical Towers, Houston, Texas 77030; 713 790-0160

Ophthalmology

HOUSTON EYE ASSOCIATES
1100 Hermann Prof. Bldg., Houston, Texas 77030, 713 790-1100

Richard S. Ruiz, M.D., F.A.C.S.
Charles E. Russo, M.D., F.A.C.S.
Malcolm L. Mazow, M.D., F.A.C.S.
Robert H. Stewart, M.D., F.A.C.S.
Robert B. Wilkins, M.D., F.A.C.S.
Jeffrey D. Lanier, M.D., F.A.C.S.
Michael A. Bloome, M.D., F.A.C.S.
Paul C. Salmonsen, M.D.
Richard L. Kimbrough, M.D.

DRS. ALPAR, TAYLOR, HOWELL, CURRIE & WEINBERGER
Ophthalmology
John J. Alpar, M.D.
Coleman Taylor, M.D.
J. Franklin Howell, Jr., M.D.
Hugh B. Currie, M.D.
Bruce L. Weinberger, M.D.
Diplomates of the American Board of Ophthalmology
15 Medical Drive, Amarillo, Texas

TEXAS RETINA ASSOCIATES
Albert Vaiser, M.D.
William B. Snyder, M.D.
William L. Hutton, M.D.
Dwain G. Fuller, M.D.
Diseases and Surgery of the Retina and Vitreous
318 Medical Arts Building, Dallas, Texas, 748-0958

BRUCE C. TAYLOR, M.D.
RICHARD L. WINSLOW, M.D.
Diseases & Surgery of the Vitreous and Retina

2811 Lemmon Ave. E., Dallas, Texas 75204
214 521-1153

McPHERSON ASSOCIATES
Diseases and Surgery of the Retina and Vitreous
Alice R. McPherson, M.D.
Robert A. Moura, M.D.
Arthur W. Willis, M.D.
Robert W. Butner, M.D.

6436 Fannin, Suite 800, Houston, Texas 77030
713 797-1903

EYE ASSOCIATES
Diseases and Surgery of the Eye
Charles A. Sargent, M.D.
Alan C. Baum, M.D.

7777 Southwest Freeway, #916, Houston, Texas 77074; 713 777-7145

CORPUS CHRISTI EYE ASSOCIATES
J. Gordon Bryson, M.D.
C. A. Struve, M.D.
John W. Lewis, M.D.

3166 Reid Drive, Corpus Christi, Texas 78404, Phone 853-7319

EYE CENTER OF AUSTIN
3913 Medical Parkway
Austin, Texas 78756; 512 451-8484

Edward J. Petrus, M.D.
Richard E. Nieman, M.D.

JOHN Y. HARPER, JR., M.D., P.A.
Diseases & Surgery of the Vitreous and Retina

601 Madison Square Medical Building
311 Camden Street, San Antonio, Texas 78212
512 226-1812

TMA Physicians' Placement Service
. . . Another service of your association

PETER R. BRINGEWALD, M.D.

Neuro-Ophthalmology

Texas Neurological Institute at Dallas, P.A.
7777 Forest Lane, Suite 347, Dallas, Texas 75230; 214 661-7676

By appointment only.

COASTAL BEND EYE ASSOCIATES

Jack A. Sahadi, M.D.

900 Morgan Avenue, Corpus Christi, Texas 78404
Telephone 512 888-4288

Orthopedic Surgery

H. H. Beckering, M.D.
L. Ray Lawson, M.D.
George Truett James, M.D.
Robert D. Vandermeer, M.D.
Wynne M. Snoots, M.D.
R. Stephen Curtis, M.D.

W. B. CARRELL MEMORIAL CLINIC

A Professional Association
2828 Lemmon Ave., Dallas, Texas

FORT WORTH BONE & JOINT CLINIC

918 8th Avenue, Fort Worth, Texas

Louis J. Levy, M.D.
Henry C. McDonald, Jr., M.D.
Fred W. Sanders, M.D.
James M. Beckley, M.D.
Joseph H. Gaines, M.D.

Ralph E. Donnell, M.D.
F. Carlton Hodges, M.D.
J. Price Brock, Jr., M.D.

ORTHOPEDIC ASSOCIATES

Diplomates American Board of Orthopedic Surgery

1133 N. 19th St., Abilene, Texas 79601

HOUSTON ORTHOPEDIC CLINIC

Joseph Barnhart, M.D.
Donald T. Lazarz, M.D.
Lee C. Detenbeck, M.D.
Thomas S. Padgett, M.D.

5620 Greenbriar, Houston, Texas 77005, 526-6262 and
Parkway Towers Professional Building, 150 West Parker Road,
Houston, Texas 77022, 691-3905

LUBBOCK ORTHOPEDIC SURGERY CLINIC

Orthopedic Surgery—Surgery of the Hand

Royce C. Lewis, Jr., M.D.
Kenneth C. Scholz, D.D.S., M.D.
G. S. Gill, M.D.

3702 21st St., Suite 9, Lubbock, Texas 79410, 806 795-8261

THE ORTHOPEDIC GROUP OF RICHARDSON

Charles E. Graham, M.D.
M. Gayle Gildewell, M.D.

Orthopedic Surgery

812 S. Central Expressway, Richardson, Texas 75080, 231-6396

THE ARLINGTON ORTHOPEDIC GROUP

H. W. Bendel, Jr., M.D.
E. E. Rising, Jr., M.D.*
C. Poindexter, M.D.
C. R. Vavrin, M.D.
Frank R. Vincenti, M.D.
Diplomates American Board of Orthopaedic Surgery
*Emphasizing Surgery of the Hand

801 West Randol Mill Road, Arlington, Texas 76012, 817 261-8284

ADDRESS CHANGE? Avoid missing or delayed mail. Send old and new address to Membership Department, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701.

LOUIS W. BRECK, M.D., P.A., F.A.C.S.

Diplomate American Board of Orthopaedic Surgery

Practice Limited to Orthopaedic Surgery

1209 North Kansas, El Paso 79902
Telephone 915 544-3831

THURSTON DEAN, M.D.

Diplomate American Board of Orthopedic Surgery

509 N. Garfield Street
Midland, Texas 79701
Telephone: 915 682-0433 or 682-0163

ORTHOPEDIC ASSOCIATES OF DALLAS

F. Leon Ware, M.D.
Dan R. Sutherland, M.D.
John B. Gunn, M.D.
Richard A. Shirley, M.D.
R. Dan Loyd, M.D.

Orthopedic Surgery

3600 Gaston Avenue, Suite 303
Dallas, Texas 75246; 214 823-7090

Otolaryngology

JACK BLUM, M.D.
LLOYD F. RITCHEY, M.D.

Otolaryngology

8215 Westchester, Suite 135, Dallas, Texas

EL PASO EAR, NOSE AND THROAT ASSOCIATES

Otolaryngology, Audiology and Electronystagmography

Mark J. Wegleitner, M.D.
Lyle D. Weeks, M.D.
Nancy Parker, M.S.-Audiologist

First American Title Bldg., Suite 160, 5959 Gateway West
El Paso, Texas 79925

Pathology

FORT WORTH MEDICAL LABORATORIES

John J. Andujar, M.D.
Dorothy Patras, M.D.

1400 Pennsylvania Ave., P. O. Box 1118, Fort Worth, Texas 76101
Telephone 817 336-7137

PRUITT MEDICAL LABORATORIES

Jack Pruitt, M.D.
E. Hernandez, M.D.
Diplomates, American Board of Pathology

Tissue Pathology, Exfoliative Cytology, Clinical Pathology,
Medicolegal Consultation
P. O. Box 160, Lufkin, Texas 75901, 634-4451

BROWN & ASSOCIATES MEDICAL LABORATORIES

Clinical Pathology, Hematology, Surgical Pathology, Exfoliative Cytology and Electrophoresis

Wilson G. Brown, M.D.
George V. Miller, M.D.
Walter G. Olin, Jr., M.D.
John R. Thomas, M.D.
S. Joseph Skinner, M.D.
Joe B. Haden, M.D.
Enrique van Santen, M.D.
Elaine V. Shalek, M.D.
Robert H. McNeely, M.D.
Diplomates American Board of Pathology

165 Hermann Prof. Bldg., Houston, Texas 77030
220 Park Plaza Prof. Bldg., Houston, Texas 77004
Telephone 527-5230
Mailing Containers on Request—Office Pickup Service in Houston

WACO CLINICAL PATHOLOGY LABORATORY

K. P. Wittstruck, M.D., F.C.A.P.
Walter Krohn, M.D., F.C.A.P.
Robert Wayne Walter, M.D., F.A.C.P.
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation
Mailing Containers on Request
2112 Washington Ave., P.O. Box 3160, Waco, Texas 76707, 756-7226

J. S. Wilkenfeld, M.D., Medical Laboratories, Inc.

J. S. WILKENFELD, M.D. ENA E. MOCEGA, M.D.
Diplomates of the American Board of Pathology
Anatomical Pathology, Clinical Pathology
Exfoliative Cytology and Dermatopathology
8850 Long Point Road, P.O. Box 55008
Houston, Texas 77055, 713 468-0738
Mailing Containers on Request—Office Pickup Service in Houston

ARTHUR L. RAINES, M.D. AND ASSOCIATES

Pathologists
DIPLOMATES, AMERICAN BOARD OF PATHOLOGY
Clinical Pathology
Surgical Pathology
Exfoliative Cytology
Medicolegal Consultation
Hospital and Clinic Laboratory Consultation
P. O. Box 118, Cleburne, Texas 76031
817 645-9181, Ext. 360
MAILING CONTAINERS ON REQUEST

HENRY B. OWENS, M.D., F.C.A.P.

Diplomate American Board of Pathology
Cytology and Tissue Pathology Only
801 E. Border St., Suite M, P. O. Box 1627
Arlington, Texas 76010, 817 461-2771
Mailing Containers on Request—Office Pickup Service in Arlington

PATHOLOGY ASSOCIATES OF TEXAS

Medical Laboratory
1050 W. Magnolia, Fort Worth, Texas 76104
P. O. Box 2176 Zip Code 76101, 817 335-5297
Diplomates, American Board of Pathology

May Owen, M.D.
John W. Alexander, M.D.
John E. Bremner, M.D.
Vincent C. Cirone, M.D.
Donald M. Cohen, M.D.
Robert W. Collison, M.D.
C. D. Fitzwilliam, M.D.
Feliks Gwozdz, M.D.
Alcina F. Jatoi, M.D.
Raoul Kunert, M.D.
Charles B. Mitchell, M.D.
B. V. Ramakrishna, M.D.
Richard C. Schaffer, M.D.

Consulting Toxicologist: Jack E. Wallace, Ph.D.

Branch Laboratory Facilities

Doctor's Building, Suite 109
800 Fifth Avenue
Fort Worth, Texas
335-5297 (Ext. 31 and 60)

Medical Tower Building, Suite 219
1550 West Rosedale
Fort Worth, Texas
335-5297 (Ext. 32 and 62)

Medical Plaza Building, Suite 110
800 Eighth Avenue
Fort Worth, Texas
335-5297 (Ext. 57 and 59)

H.E.B. Medical and Dental Center, Suite 401
2700 Tibbets Drive
Bedford, Texas
283-2861

Physical Medicine & Rehabilitation

TEXAS REHABILITATION HOSPITAL OF GONZALES WARM SPRINGS FOUNDATION, INC.

P. O. BOX 58, GONZALES, TEXAS 78629
Facilities for Physical Restoration
Physical Therapy, Occupation Therapy, Speech Therapy,
Recreational Therapy, School from first grade through twelfth grade
DAVID E. GUMPER, Administrator
LARRY E. BROWNE, M.D., Medical Director

ROBERTO G. ROLFINI, M.D.

Diplomate American Board of Physical Medicine & Rehabilitation
Rehabilitation Medicine and Electromyography
702 Rosa Verde Tower, 343 W. Houston Street
San Antonio, Texas 78205, Telephone 226-2424

SHOAL CREEK REHABILITATION CENTER

3501 Mills Avenue, Austin, Texas 78703, 512 452-0361
Rodney J. Simonsen, M.D., Medical Director
Joe T. Powell, M.D., Associate Director
Comprehensive rehabilitation facilities for spinal cord injury, stroke, head injury, pain management, and related conditions

Plastic Surgery

THOMAS D. CRONIN, M.D., F.A.C.S.
RAYMOND O. BRAUER, M.D., F.A.C.S.
THOMAS M. BIGGS, M.D., F.A.C.S.
LAURENCE E. WOLF, M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery

PLASTIC SURGERY

5419 Caroline St., Houston, Texas 77004, 523-8131

WILLARD C. SELLMAN, JR., M.D.

Plastic, Maxillo-Facial and Hand Surgery
530 Locke Medical Building
6011 Harry Hines Blvd., Dallas, Texas 75235, 637-4770

JOHN B. PATTERSON, M.D., F.A.C.S.

Diplomate American Board of Plastic Surgery
Plastic, Reconstructive and Cosmetic Surgery
612 Doctors Bldg., Fort Worth, Texas 336-0356

PLASTIC SURGERY ASSOCIATES

Simon Fredricks, M.D., F.A.C.S.
Jonathan J. Dora, M.D.
Aesthetic, Plastic, Reconstructive and Hand Surgery
1103 Medical Tower, Houston, Texas 77030, 795-5575

DAVID A. GRANT, M.D., F.A.C.S.

Diplomate American Boards of Surgery and Plastic Surgery
Plastic & Reconstructive Surgery
Cosmetic Surgery
606 Medical Plaza Bldg., 800 Eighth Avenue, Fort Worth, Texas 76104, 335-4751

VALENTIN GRACIA, M.D., P.A., F.A.C.S., F.I.C.S., D.A.B.

Aesthetic Surgery—Burns
1001 W. Rosedale, Fort Worth, Texas 76104, 336-0446

PATRICK H. BECKHAM, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1111 West 34th Street, Suite 207, Austin, Texas 78705, 459-3258

WILLIAM E. BARNES, M.D.
Diplomate American Board of Plastic Surgery

Cosmetic Surgery
Plastic & Reconstructive Surgery

1301 West 38th Street, Suite 608, Austin, Texas, 454-7659

JOHN E. CARTER, M.D., P.A.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Plastic Surgery

7711 Louis Pasteur Drive, San Antonio, Texas 78229
Telephone: (Area Code 512) Office 696-2390 Medical Exchange 227-6331

JOSEPH C. FORD, M.D., P.A., F.A.C.S.
Diplomate American Board of Surgery
Diplomate American Board of Plastic Surgery

Plastic Surgery

508 Madison Square Medical Building
311 Camden, San Antonio, Texas 78215, 224-5509

BROMLEY S. FREEMAN, M.D., F.A.C.S.
D. ROBERT WIEMER, M.D., F.A.C.S.
Diplomates American Board of Plastic Surgery

Plastic & Reconstructive Surgery

7000 Fannin, Suite 1770, Houston, Texas 77025
713 795-5584

JACK L. CONLEE, M.D.
Diplomate American Board of Plastic Surgery

Plastic and Cosmetic Surgery

3318 S. Alameda, Suite 1, Corpus Christi, Texas, 855-7359

PLASTIC SURGERY ASSOCIATION
LEONARD KOCH, M.D.

Plastic and Reconstructive Surgery
Surgery of the Hand

3601 21st Street, Suite 5, Lubbock, Texas 79410, 806 792-2313

ROBERT L. CLEMENT, M.D. AND ASSOCIATES
Diplomate American Board of Plastic Surgery

Plastic, Reconstructive Surgery

1111 West 34th Street, Suite 205, Austin, Texas 78705, 512 459-3101

STEPHEN C. LESAUVAGE, M.D.
Diplomate American Board of Plastic Surgery

Plastic, Reconstructive and Hand Surgery
Cosmetic Surgery

1318 Clinic Drive, Tyler, Texas 75701; 214 593-8296

JOSEPH P. FLEMING, M.D., F.R.C.S.(C), F.A.C.S.

Plastic and Reconstructive Surgery

1213 Hermann Drive, Suite 645, Park Plaza Professional Building
Houston, Texas 77004; 713 524-7545

JUDSON L. CROW, M.D.
Diplomate, American Board of Surgery
Diplomate, American Board of Plastic Surgery

Plastic and Reconstructive Surgery

730 N. Main—Suite 716, San Antonio, Texas 78205, 512 224-2075

Psychiatry

Perry C. Talkington, M.D.
Howard M. Burkett, M.D.
Jerry M. Lewis, M.D.
James K. Peden, M.D.
Dode M. Hanke, M.D.
Doyle I. Carson, M.D.
Joe W. King, M.D.
Keith H. Johansen, M.D.
Charles G. Markward, M.D.
Claude R. Nichols, M.D.
Larry E. Tripp, M.D.
Larry R. Kimsey, M.D.
Charles M. Smith, M.D.
Gregory G. Dimijian, M.D.
Linda R. Hughes, M.D.
Roy H. Fanoni, M.D.
Byron Howard, M.D.
Larrie W. Arnold, M.D.
Madeline W. Harford, M.D.
John G. Looney, M.D.

Practice limited to
PSYCHIATRY

4645 Samuell Blvd., Dallas, Texas
Timberlawn Psychiatric Hospital
4600 Samuell Blvd., Dallas, Texas
Telephone 381-7181

PERRY C. TALKINGTON, M.D.
Psychiatry

4645 Samuell Blvd., Dallas, Texas 75228, 214 381-3849

FABRE CLINIC

LOUIS F. FABRE, JR., M.D., Ph.D.
Certified in Psychiatry by the American Board of Psychiatry and Neurology

Individual and Group Psychotherapy
Children — Family — Alcoholism

Free of charge to patient MEDICATION CLINIC
FOR PATIENTS WITH ANXIETY OR DEPRESSION
IN CONJUNCTION WITH CNS RESEARCH WITH
PSYCHOPHARMACOLOGICAL COMPOUNDS

DAVID McLENDON, Ph.D.
Licensed Clinical Psychologist

Individual and Group Psychotherapy
Diagnostic Evaluations and Counseling

H. JOHN JACKSON, Ed.D.
Educational Psychologist

Administrative Consultation to School District
Program Organization Consultation
Individual Family Counseling

5503 Crawford Street, Houston, Texas 77004, 713 526-2328

JOSE G. GARCIA, M.D., P.A.

General Psychiatry, Forensic Psychiatry,
Legal Medicine

Jose G. Garcia, M.D., Psychiatrist
J. M. Bloom, Ph.D., Psychologist

7000 Fannin, Suite 1800, Houston, Texas 77030; 713 795-4822

TMA Automobile Lease Program
. . . Another service of your association

HARRIS HAUSER, M.D. AND ASSOCIATES
Psychiatry

Frank H. Chesky, M.D.
Jose A. Gutierrez, M.D.
Harris M. Hauser, M.D.
Linda S. Blume, A.C.S.W.

7777 Southwest Freeway, Suite 1004, Houston, Texas 77074; 713 772-4600
1740 West 27th, Suite 315. Houston, Texas 77008; 713 772-4600

Psychiatry & Neurology

PASADENA NEUROPSYCHIATRIC CLINIC ASSN.
Robert E. Hazlewood, M.D., J. J. Leyva, M.D.

Department of Psychology
Allen Goss, Ph.D., Jim M. Phillips, Ph.D.
Practice Limited to Neurology and Psychiatry
Office Hours By Appointment
First Pasadena State Bank Building
1001 E. Southmore, Suite 1103, Pasadena, Texas 77502, 473-7646

STEPHEN WEISZ, M.D.
Practice Limited to Neurology and Psychiatry

836 Locke Medical Building, 6011 Harry Hines Blvd., Dallas, Texas 75235, 214 688-0344

THE FORT WORTH NEUROPSYCHIATRIC CENTER
•Herbert G. Rush, M.D.
A. Arauzo, M.D.
Sanford Lehrer, M.D.

1066 W. Magnolia Avenue, Fort Worth, Texas 76104, 336-5469

•Diplomate American Board of Psychiatry and Neurology

H. KORNBLIT, M.D.
Neurology—Headache Clinic

Memorial City Prof. Bldg. #176
902 Frostwood, Houston, Texas 77024

HAUSER CLINIC
Psychiatry and Neurology

Section of Psychiatry
•Abe Hauser, M.D.
•Robert I. Hauser, M.D.
•H. James Stuart, M.D.
•Javier A. Zapata, M.D.
•Susan B. Darsey, M.D.
•Harvey A. Rosenstock, M.D.
•Cal K. Cohn, M.D.

Section of Neurology
•Gerald Ratinov, M.D.
Diane S. Gelfand, M.D.

Section of Social Work
Pamela Plimmer, A.C.S.W.
Marguerite Papademitriou, A.C.S.W.
Wendy Smolins, M.S.S.W.

Administrator
Richard J. Kurzenberger

7777 Southwest Freeway, Suite 1036, Houston, Texas 77074
Telephone 713 776-8600

•Diplomate, American Board of Psychiatry and Neurology

TMA Action/TMA Legislative Bulletin
. . . Another service of your association

MEMORIAL NEUROLOGICAL ASSOCIATION
Neurology, Electroencephalography, Electromyography and C. T. Scan

James L. Frey, M.D.
Harris M. Hauser, M.D., F.A.A.N.
Cheor J. Kim, M.D.
Lorenzo Lorente, M.D.

1740 West 27th, Suite 315, Houston, Texas 77008, 713 861-4516
427 West 20th, Suite B100, Houston, Texas 77008, 713 868-4552
7777 Southwest Fwy., Suite 1004, Houston, Texas 77074, 713 772-4600

HAUSER PSYCHIATRIC ASSOCIATES
Psychiatry and Neurology
•Ronald J. Hauser, M.D., F.A.P.A.

Individual and Group Therapy
Marital and Family Counseling

Laurence J. Gross, M.S.W., S.P.
Judy Kanas, M.S.W., S.P.

•Diplomate, American Board of Psychiatry and Neurology

9100 Westheimer, Suite 40
Houston, Texas 77063; 781-6742

ROBERT R. PIERCE, M.D., P.A.
Diplomate (Neurology) American Board of Psychiatry and Neurology

Neurology and Electroencephalography

Medical Towers Building, Suite 608, 6608 Fannin, Houston, Texas 77030
713 795-4163

Radiology

ROYAL WERTZ, M.D., F.A.C.R.
Practice Limited to Radiology

800 Rusk Street, Amarillo, Texas 79106, 373-8324

Harvey M. Lowry, M.D., F.A.C.R.
James R. Gish, M.D., D.A.B.R.
Edward A. Sheldon, M.D., D.A.B.R.
James P. Wills, M.D., D.A.B.R.

RADIOLOGY
109 Doctors Bldg., 838-4543
502 Goodhue Bldg., 838-2224
Baptist Hospital, 833-6421
Beaumont, Texas

KARL THORD DOCKRAY, M.D.
Diplomate, American Board of Nuclear Medicine
Diplomate, American Board of Radiology

Roentgenology, Nuclear Medicine, Xeromammography

763-5774 Office 765-7701 Page 762-0471 Mobile
Lubbock, Texas

SRINI MALINI, M.D.
Diagnostic Ultrasound

1513 Medical Towers Bldg., Houston, Texas 77030, 713 795-5672

Texas Continuing Education Directory
. . . Another service of your association

Rheumatology

DON E. CHEATUM, M.D., F.A.C.P.
Diplomate American Boards of Internal Medicine and Rheumatology
CARLOS M. KIER, M.D.
Diplomate American Board of Internal Medicine
Rheumatology Consultation by Physician Referral
Dallas Medical & Surgical Clinic
4105 Live Oak St.
Dallas, Texas 75204, 823-4151

ROY M. FLEISCHMANN, M.D.
Diplomate American Board of Internal Medicine and Rheumatology
Rheumatology Consultation by Physician Referral
3707 Gaston Avenue, Suite 810, Dallas, Texas 75246; 827-0868

Thoracic Surgery

Donald L. Paulson, M.D.
Harold C. Urschel, Jr., M.D.
Maruf A. Razzuk, M.D.
DRS. PAULSON, URSCHEL, RAZZUK AND ASSOCIATES
Thoracic and Cardiovascular Surgery
1201 Barnett Tower
3600 Gaston Avenue, Dallas, Texas 75246; 824-2503

JOHN L. KEE, JR., M.D.
Thoracic Surgery
The Doctors Bldg., 3707 Gaston Ave., Dallas, Texas 75246; 826-5184

ALLAN L. GRAHAM, M.D., F.A.C.S.
KARAMAT U. CHOUDHRY, M.D., F.A.C.S.
Diplomates American Board of Surgery and Board of Thoracic Surgery
ROBERT W. MILEY, M.D.
Diplomate American Board of Surgery
Cardiac, Thoracic and Vascular Surgery Associates
800 Eighth Ave., Suite 626, Fort Worth, Texas 76104: 332-7878

HECTOR O. YANES, M.D., P.A., F.A.C.S., F.A.C.C.
Cardiac, Vascular and Thoracic Surgery
Diplomate American Board of Surgery and
American Board of Thoracic Surgery
432 Medical Plaza, 800 Eighth Ave.,
Fort Worth, Texas 76104, 332-1947

RICHARD E. WOOD, M.D.
ROBERT E. RAWITSCHER, M.D.
Cardiac, Thoracic and Vascular Surgery
Baylor Medical Plaza, Barnett Tower, 3600 Gaston Avenue,
Suite 404, Dallas, Texas 75246; 214 827-3890
Hours By Appointment

Hugh E. Wilson, M.D. and Associates
HUGH E. WILSON, M.D.
CHARLES T. MEADOWS, M.D.
Thoracic and Cardiovascular Surgery
6161 Harry Hines Boulevard
Dallas, Texas 75235; 214 637-3470

"Every man owes some of his time to the upbuilding of his profession"
—Theodore Roosevelt
Take an active role in TMA and your county society.

Urology

ELGIN W. WARE, JR., M.D.
GEORGE E. HURT, JR., M.D.
L. MICHAEL GOLDSTEIN, M.D.
Urology
3600 Gaston Avenue, Dallas, Texas 75246

THE UROLOGY CLINIC
Dolphus E. Compere, M.D., F.A.C.S.
Grant F. Begley, M.D., F.A.C.S.
Hugh Lamensdorf, M.D., F.A.C.S.
Box 11340, 1415 Pennsylvania Ave., Fort Worth, Texas 76109
817 336-5711

H. M. GIBSON, JR., M.D., F.A.C.S.
ABEL GARDUNO, M.D.
Certified by American Board of Urology
Practice Limited to Urology
512 University Towers Bldg., 1900 N. Oregon St., El Paso, Texas
Telephone 532-8130 & 533-4765

MARVIN GREER RAPE, M.D.
NEWTON F. McDONALD, M.D.
JAMES E. MORNEAU, M.D.
Practice Limited to Urology
1703 St. Joseph Prof. Bldg., 2000 Crawford, Houston, Texas 77002

DONALD J. NEESE, M.D.
Diplomate of American Board of Urology
Practice Limited to Urology
570 Park Plaza Professional Building
1213 Hermann Drive, Houston, Texas 77030; 713 524-3931
400 Medical Center Blvd., Suite 207, Webster, Texas 77598; 713 332-2466

EUGENE R. TODD, M.D., P.A.
Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology
Urology—Adult and Pediatric
3434 Swiss Ave., Suite 406, Dallas, Tex. 75204, 214 826-3500

DALLAS UROLOGY ASSOCIATES
David D. Reisman, M.D.
Donald J. Logan, M.D.
Allen S. Plotkin, M.D.
Donald L. McKay, M.D.
Practice Limited to Urology
Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

ATTEND THESE TMA MEETINGS IN 1978

- Conference on Legislation, Jan. 21, Austin
- Annual Session, May 10-14, San Antonio
- Conference on Medical Service, Sept. 23, Austin

Cassette tapes now available of the TMA's 1977 Conference on Medical Service!

For additional information and order form, write TMA Communication Department, 1801 North Lamar Blvd., Austin, Texas 78701.

Classified Advertising

Physicians Wanted

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from the big city problems. Call collect Dr. David M. Pogue, at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIAN AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals. 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6383.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Taylor Smith, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

EMERGENCY DEPARTMENT GROUP, HOUSTON AREA, EXPANDING—choice of salary or fee-for-service with guarantee—malpractice paid—Call 713-861-7942 or write Greater Houston Emergency Physicians Association, 625 West 19th, Houston, Texas 77008.

FAMILY PRACTICE—In small city South Central Texas: San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas 512-672-2811.

GENERAL SURGEON: American graduate, preferably just out of residency to do all major surgery for well established clinic. Please reply to Ad-722, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTICE, GENERAL PRACTICE—Wanted immediately to join physician staff in rural community one-hour from Dallas-Fort Worth area. Extremely active practice with good benefits and an opportunity to enter into the corporation. Practice is with physicians clinic, 26-bed hospital, and 42-bed nursing home within the same building complex. Excellent arrangement for family practice. For further information contact Roger E. Marks, M.D., 817-897-2215 or 817-897-4436; Glen Rose, Texas.

GENERAL INTERNIST AND FAMILY PRACTITIONER NEEDED to join nine man group in Clifton, Texas. Located in the heart of Texas, 30 miles NW of Waco; 15 miles from Lake Whitney. Good fishing; excellent hunting; new modern golf course. Excellent schools and churches in a growing progressive community and directly associated with a 75 bed, Hill Burton hospital which is fully accredited by the joint commission. Terms open at first with partnership in future. Please contact V. D. Goodall, M.D., Clifton Medical & Surgical Clinic Association, Clifton, Texas 76634. Telephone 817-675-8621 or 675-3113.

GENERAL PRACTITIONER NEEDED: To work with general surgeon doing GP work. Excellent opportunity for a doctor desiring family practice work. May start with salary of $45,000 per year negotiable. City has population of 9,000 with trade area of 25,000 to 30,000. Contact Chris S. Cruzcosa, M.D., 300 S. 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

PUBLIC HEALTH DIRECTOR: The City of Austin, Texas, is accepting applications for the position of Director, Austin-Travis County Health Department. Full medical and administrative direction of local public health activities in a $4 million department of the City. Must be an MD with administrative experience; Texas license and MPH preferred. Salary starts at $35,000+, depending upon qualifications. Send resume to: Dan H. Davidson, City Manager, P.O. Box 1088, Austin, Texas 78767; 512-477-6511. Equal employment opportunity.

PHYSICIANS WANTED—Growing hospital in progressive East Texas town near metroplex needs ambitious physicians to join staff. Write Paul Bennet, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75647.

INDUSTRIAL PHYSICIAN TO JOIN multispecialty group as an addition to a large industrial department. Some surgical training desired; family practice boards acceptable. Work consists of pre-employment physicals, industrial injuries, and family practice. Salary and partnership negotiable and competitive. Keogh plan available. Adequate time off. Modern clinic facilities. Growing town of 125,000. Send curriculum vitae and references to Harry Ledbetter, M.D., 1518 Tenth Street, Wichita Falls, Texas 76301.

TEXAS, NORTHEAST: Emergency physicians. Immediate openings available in established ACEP oriented group. Positions in several communities available. Prefer career-oriented emergency MDs. Additional training and/or experience required. Flexible schedule, fee-for-service with guarantee and usual fringes including malpractice insurance. Write: Emergency Medicine Consultants, 3600 Gaston Avenue, Dallas, Texas 75246, or call 214-823-6850.

HOUSTON EMERGENCY PHYSICIANS ASSOCIATES has immediate openings for career oriented emergency physicians with surgical or emergency medicine backgrounds. Continuing education required. Teaching and non-teaching positions available in the city limits of Houston, Texas. Our physicians' present salaries are between $50,000 and $80,000 per annum based on tenure and experience. Flexible scheduling to allow for vacations and continuing education. Benefits include malpractice insurance, major medical, life, disability income. Call or send CV: Houston Emergency Physicians Associates, P. O. Box 36949, Houston, Texas 77036; 713-776-1081.

NEED FULL TIME PHYSICIAN at medical facility of Gary Job Corps Center in resort community of San Marcos, Texas. Involvement is 8 a.m. to 5 p.m., Monday through Friday and on call alternate nights and weekends. Fringe benefits include a desirable housing arrangement and prepaid malpractice insurance. Salary upper $30s and negotiable. Contact Dr. M. D. Heatly, 512-396-6570 or at night 392-3044; or Mr. Al Martinez, Hospital Administrator, 396-6422; or write P.O. Box 645, San Marcos, Texas 78666.

INTERNIST—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

TEXAS PRACTICES. Economic and professional climate excellent. Have requests from physicians in Texas communities for additional physicians, usually in the same field. City suburbs, small and medium size towns. Attractive financial guarantees. No fee to physician candidate. Please write with C.V. and preferences to Sanford Smith, Professional Practice Management, Inc., 1102 Kingwood Drive, Humble, Texas 77339.

GENERAL PRACTITIONER TO DIRECT ALCOHOLISM PROGRAM. Building a better and more dynamic program in state hospital. Ideal family living town of 30,000—good schools, recreation, mild west Texas weather. Salary $37,000 to $40,000. Texas license required. Call or write: Douglas Cheney, Personnel Director, Big Spring State Hospital, Box 231, Big Spring, Texas 79720. 915-267-8216.

CHILD PSYCHIATRY RESIDENCY may be taken before or after Adult Psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psychopharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services, and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed inpatient unit for children. Liaison with graduate schools, medical school and community programs. Stipends: first year, $15,000; second year, $16,000; third year, $17,000; fourth year, $18,000. Contact Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

EXPANDING MEDICAL CLINIC has opening for internal medicine, OB-GYN and family practice. Apply: D. McCann, 2616 North Oregon, El Paso, Texas 79902; telephone 915-532-5232.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $10.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

PRACTICE in the most sophisticated Texas city. Enjoy the small town atmosphere. Explore Pleasant Grove Hospital, first medical facility ever for 170,000 citizens in Southeast Dallas County. 172-bed hospital, now open, adjacent to professional building due completion September. Explore the possibilities with A. D. Hethcock, 214-398-1531.

DIAGNOSTIC RADIOLOGIST—trained in nuclear medicine, angiography, ultrasound to fill opening in four member radiology group with office and two hospitals in Lower Rio Grande Valley. Attractive fringe benefits and salary leading to full partnership. Send curriculum vitae. Drs. Martin, Chapa, Baker and Sokolosky, 1616 Ed Carey Drive, Harlingen, Texas 78550.

PSYCHIATRIC RESIDENCY IN APPROVED three-year program. Effective connections with universities, medical schools, private clinics and community centers. Outstanding faculty and programs. Stipends with Texas license are $15,000, $16,000 and $17,000 per year. In addition, now offering residency in child psychiatry. For full information, write to: Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

CARDIOLOGIST - ONCOLOGIST/HEMATOLOGIST - GENERAL INTERNIST & PULMONARY medicine specialist needed to add to our 9-doctor IM group practice. We are a referral practice in new office, with new equipment adjacent to a private hospital. The hospital has a new Cath. Lab and CT scanner. Attractive financial incentive plan. Send CV to Robert L. Hatcher, M.D., Valley Diagnostic Clinic, 2121 Pease St., Harlingen, Texas 78550; 512-425-7200.

POSITIONS VACANT FOR TEXAS: Surgeon with thoracic surgery training wanted to join a busy solo practice summer of 1978. Opportunity to do general surgery while building up a thoracic practice. Board eligibility in general surgery required. Eligibility for thoracic surgery preferred. Please reply to Ad-735, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTITIONER AND PEDIATRICIAN NEEDED to join multi-specialty group in west Texas city of 175,000. New clinic and hospital facilities. Top salary with partnership opportunity. University Medical Surgical Clinic, 6602 Quaker Avenue, Lubbock, Texas 79414.

INTERNAL MEDICINE/CARDIOLOGY—64 bed hospital in East Texas area with new fully equipped cardio-pulmonary department. Please contact Paul Bennett, Administrator, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75647; 214-845-2281.

UNUSUAL PRIVATE PRACTICE OPPORTUNITITES now available in general practice and internal medicine, not cardiology oriented. Opportunities available in a 158-bed proprietary hospital, physician owned and operated. Medical success in your practice guaranteed by cash of $5,000 per month for a period of six months. Free rent and other benefits also included. Pasadena, Texas, is a progressive city of 150,000 located as a suburb of Houston, Texas, near the Johnson Space Center. Community enjoys high per capita earnings, open staff policies, and unlimited medical opportunities. Applications will be restricted to aggressive and American-trained physicians only. For additional information, write or call Richard Fly, Administrator, Pasadena General Hospital, 1004 Seymour, Pasadena, Texas 77506. Telephone 713-473-1771.

EMERGENCY DEPARTMENT STAFF PHYSICIAN AT MEDICAL CITY DALLAS HOSPITAL. Excellent facilities and back-up. Flexible scheduling. Minimum guarantee/fee for service. Contact Ronald Hellstern, M.D., Emergency Department, P.O. Box 5999, Dallas, Texas 75222; 214-522-5481.

BOARD CERTIFIED FP NEEDS ASSOCIATE for active practice. Across street from 160 bed hospital. Own lab and x-ray. All specialties available, full privileges. College town, deep east Texas. Forests and lakes for recreation. Fast growing area with diversified economy. Terms negotiable. Ralph C. Bailey, M.D., 1209 N. Mound Street, Nacogdoches, Texas 75961; telephone 713-564-3731.

INTERNIST—Pine hills of East Texas. Thriving city of 65,000. Extraordinary cultural and recreational activities. Medical center of East Texas. Nine man group—three GP, three IM, three surgeons. Please contact Robert Felix, Administrator, Medical & Surgical Clinic, P.O. Box 6026, Tyler, Texas 75711; phone 214-593-1721.

SURGEON—Board certified or eligible wanted to join 12 physician multispeciatly group; in an area serving 45,000 people within Dallas-Fort Worth Metroplex. Excellent hospital and community facilities. Financial arrangements dependent on ability, training and boards. Call 817-295-2021 or send resume to P.O. Box 157, Cleburne, Texas 76031.

ORTHOPEDIST—Board certified wanted to join 12 physician multi-specialty group; in an area serving 45,000 people within Dallas-Fort Worth Metroplex. Excellent hospital and community facilities. Financial arrangements dependent on ability, training and boards. Call 817-295-2021 or send resume to P.O. Box 157, Cleburne, Texas 76031.

INTERNIST—Board certified or eligible wanted to join 12 physician multispecialty group; in an area serving 45,000 people within Dallas-Fort Worth Metroplex. Excellent hospital and community facilities. Financial arrangements dependent on ability, training and boards. Call 817-295-2021 or send resume to P.O. Box 157, Cleburne, Texas 76031.

ARE YOU TIRED OF THE FRUSTRATIONS of pediatric practice and are interested in practicing allergy under a Board-Certified Allergist? If so, write P.O. Box 1761, Austin, Texas 78767. Please enclose a curriculum vitae.

PRACTICE OPPORTUNITIES ACROSS THE STATE, in cities and towns, salary or fee for service. Attractive financial arrangements. Assistance with red tape. Send resume and preferences to: Texas Doctors Group, P.O. Box 177, 500 International Life Building, Austin, Texas 78767.

TEXAS, IRVING: EMERGENCY PHYSICIANS. 213 bed hospital nestled in a community just outside Dallas (population 117,000). Home of the Dallas Cowboys. Very active hospital staff with specialty and general backup. Positions available for full time career oriented MDs. Salary negotiable. Provision for standard fringes including malpractice insurance. Send CV to Professional Emergency Service Association, 913 N. Bishop, Dallas, Texas 75208. Call 214 943-4768.

TWO PRIMARY CARE PHYSICIANS NEEDED to serve a rural, medically underserved, growing resort and retirement area of 8,500+ people. Must have MD or DO, Texas license and strong interest in rural, family and gerontological health problems. Contact, Project Director, San Jacinto County Health Services, Inc., P.O. Box 644, Coldspring, Texas 77331. 713 653-4554. An equal opportunity employer.

EXCELLENT OPPORTUNITY FOR FAMILY PHYSICIAN, preferably bilingual, but not necessary, to practice in Roma, Texas, close to Old Mexico. Well equipped luxury office, including laboratory and x-rays. No investment required. Negotiable terms. Write Ad-756 *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

MOTLEY COUNTY: NEED ONE OR MORE FAMILY PHYSICIANS. Trade area approximately 13,000; rural area, primarily farming and ranching. One physician needs relief and backup. 12-bed hospital; clinic furnished to physicians free, with guaranteed salary. If physician agrees to three year contract, clinic and equipment offered to physician at wholesale or below at end of contract. Motley General Hospital, Drawer A, Matador, Texas 79244.

Situations Wanted

FMG from University of Mexico. Board eligible general surgeon with board experience in general practice. Interested in southwest Texas, doing general surgery alone if necessary, general practice, too. Group practice is preferred. All locations considered. Contact Ad-738, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

UROLOGIST, age 31. Will complete 5 year program June 1978. Board eligible, FLEX, available July 1978. Seeking solo, association, partnership, group or clinic practice in Texas. Please reply to Ad-742, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST PULMONARY: 33, board qualified, university trained. Private practice experience. Will do internal medicine and pulmonary medicine. Available January 1978. Reply to Charles Zavala, M.D., 2728 Oak Road, #138, Walnut Creek, California 94596.

PEDIATRICIAN: 31 year old, board certified, well trained and experienced in the U.S. Excellent references. Seeks practice opportunity—solo, group, partnership or institution in metropolitan Houston, Dallas, Fort Worth or Austin. Available December 1977/January 1978. Please reply to Ad-744, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

32 BAYLOR COLLEGE OF MEDICINE STUDENTS graduating on November 18, 1977—and many looking for interim positions between graduation and residency which begins in July 1978. Salary negotiable. Address correspondence to November Graduates Committee, Attention Dr. Major Bradshaw, Dean, Office of Student Affairs, 1200 Moursund, Houston, Texas 77030; 713-790-4600.

SEEKING LOCATION: Third year pediatric resident at University of South Florida desiring private or group practice position in central, east, or southeast Texas; also would consider El Paso. Former Texas resident and 1975 graduate of The University of Texas Southwestern Medical School. Have Texas license. Please reply to Ad-743, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD ELIGIBLE ANESTHESIOLOGIST with 14 years of practice in Michigan wants to relocate in Texas, preferably in medium size university city. Just got Texas license and can be availible soon. Please reply to Ad-745, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN, FMG, Board certified and university trained. Extensive practice and teaching experience in pediatric and adolescent medicine. Will consider some family practice. Excellent references, desire associate, group or hospital based practice in suburban metropolitan city or medium sized community. Available any time. Please reply to Ad-748, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ANESTHESIOLOGIST: 48, board eligible, wide experience. Eight years anesthesia, four years in England D.A. (Royal College). Available June 1978. Group or fees for service. Please reply to Ad-703, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTITIONER, Canadian graduate, age 45; 19 years experience in general practice in same location wishes to relocate with clinic or group in Corpus Christi area. Please reply to Ad-751, *Texas Medicine*, 1801 North Lamar Blvd., Austin Texas 78701.

CANADIAN GENERAL PRACTITIONER will consider limited part-time position, preferably in San Antonio area. Visa and Texas license being processed. Age 63 and physically fit. Dr. F. Sheedy, 574 Coventry Road, Winnipeg, Canada R3R 1B6; telephone 405 885-5116.

ANESTHESIOLOGIST—35, married, board certified, two years active practice, presently instructor university hospital; New York, Maryland licenses; seeks relocation to join partnership or group, available two months notice. Please reply to Ad-752, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SEEKING LOCATION: 37 years old physician, four years US post-graduate training in general surgery, excellent experience in trauma and ER. Very good references, pending of Texas temporary license. Seeks suitable position in Southeastern Texas area (Galveston, Houston, etc.). Speaks fluently several languages. Dr. G. Durand, 143-40, 41st Avenue, Flushing, New York 11355; 212 463-9070.

ANESTHESIOLOGIST: Board eligible, university hospital trained, seeks group practice. Experience in open heart, neurosurgery, ICU. Available, July 1978. Please reply to Ad-753, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST (Diagnostic) recently board certified. Texas licensed. Seek partnership/group/association. Prefer Houston or Gulf Coast location but will consider others. Locum tenens considered. Available at short notice. Recent faculty appointment. Contact Ad-754, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

DIABETOLOGIST-ENDOCRINOLOGIST-INTERNIST. ABIM Certified, endocrine board eligible. Desires private practice, solo or partnership. Has broad clinical and lab experience. Will do part general internal medicine. Available July 1978. Please reply to Ad-755, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED INTERNIST, 32, with gastroenterology subspecialty, seeking group, hospital or solo practice with first year income guarantee. Available July 1978. Write: Rajkumar Warrier, M.D., 68-A Manbattan Court, Brooklyn, New York 11235.

WANT TO BUY—Mexican-American general practice in Houston. Contact M. G. Mater, 5353 West Alabama, Suite 502, Houston, Texas 77056.

BOARD ELIGIBLE GENERAL SURGEON, 33, good experience trauma, orthopedics, vascular surgery. Desires to relocate. Bilingual Spanish-English. Prefers associate or group practice. Please reply to Ad-757, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy, laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 828-2761, or write P.O. Box 18237, Dallas, Texas 75218.

AUSTIN—NEW PROFESSIONAL PARK. Int. Med., GP, FP, Peds, OB/GYN, ENT, Radiologist to associate in group setting for solo practice. University town, new hospital. Cannon Professional Park, 1110 William Cannon Drive, Austin, Texas 78745. Telephone 512-451-8484 or 512-444-1954.

FOR SALE OR LEASE: Busy general practice office, with or without furniture and/or equipment, located in Robstown, Texas. Panelled interior, approximately 1250 sq. ft. containing three treatment rooms, one lab (dark room only), large reception room, business office, one large bathroom, three closets, numerous built-in cabinets, tile flooring, one doctor's office carpeted. Good condition. If interested contact Mr. John North, 512-883-9387 or call 512-853-1531 for information.

HOUSTON—TEXAS MEDICAL CENTER AREA. Office space to sublet. Three fully equipped examining rooms and consultation office. X-ray, EKG and business office use also available. Contact Dr. Barry Goodfriend, Internal Medicine Associates, 918 Medical Towers Building, Houston, Texas 77030; 713 797-9911.

RECREATIONAL PROPERTY ON GULF OF MEXICO—12¾ acres on South Padre Island, Texas. 375 front feet on beach and proposed road, 1445 feet deep. Fantastic tax advantage and land investment. Small down payment. 8% interest only for 10 years. Private 214-238-0943; 705 Shadywood Lane, Richardson, Texas 75080.

DOCTORS DREAM: 4+ bedrooms, 3½ baths, 3 car garage. Over 5,000 square feet. Five minutes from Houston's Medical Center in most prestigious part of town. Study quarters could be used for doctors practice. Custom built, marble floors, many built-ins. Professionally landscaped. Fruit trees, etc. For more information call Homes, etc., 713-977-0531.

Business and Financial Services

PERSONAL FINANCING AND BUSINESS LOANS $5,000 to $50,000. Use for starting or expanding practice, equipment purchase, investment or debt consolidation. All details arranged by mail to your home or office. Write: Vern Britton, President, Financial Resources Co., Box 502-T, Richmond, Virginia 23204 or call 804-262-5969.

SHOULD GEMS BE PART OF YOUR INVESTMENT PLANNING? Write for our free brochure on the pros and cons of investing in gems. Researched and written by experienced professionals in mining, gems, economics and finance. In this day of irresponsibile jury awards, gems, with the liquidity of cash, may be an answer to planning your family's financial security. Write Dr. A. A. Mallas, Jr., President, Kashan, Inc., P.O. Box 3318, Austin, Texas 78764, or call 512-327-2683.

Miscellaneous

WANT TO PURCHASE—used office equipment suitable for family practice. Any and all equipment needed. Please reply to Ad-749, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with counseling and medical plan for the expectant mother who is planning adoption for her baby. Costs adjusted to ability to pay. MARYWOOD, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251. (Formerly HOME OF THE HOLY INFANCY)

Advertising Directory

American Physicians Insurance Exchange	15
Arlington Neuropsychiatric Center	23
Beverly Hills Hospital	80
H. E. Eugene Bonham, M.D.	91
The Brown Schools	49
Burroughs Wellcome	51
Comatic Laboratories	3rd Cover
Dallas Medical & Surgical Clinic and Hospital	2nd Cover
Gentec Hospital Supply Company	18
Gulf Coast Emergency Physicians Assn.	105
Insurance Corporation of America	71-72, 73
Ives Laboratories	13
Mead Johnson Laboratories	4
Kelsey-Seybold Clinic	80
Eli Lilly and Company	34
Medical Arts Clinic of Corsicana	91
The Medical Protective Company	50
Medical Grand Rounds	49
New Orleans Graduate Medical Assembly	50
Nuclear Diagnostics	49
Pharmaceutical Manufacturers Association	54-55
Practice Productivity	5
Professional Systems & Services	49
The Prudential Insurance Company of America	9
Roche Laboratories	1, 2, 28-29, 53, 106
Scott & White Clinic	Back Cover
Smith Kline & French	52
Starlite Village Hospital	105
Taos Medical Symposium	23
Texas Bank & Trust Company	50
Texas Medical Association	
Automobile Leasing Program	89
Memorial Library Fund	88
Timberlawn Psychiatric Hospital	Back Cover
Torbett, Hutchings, Smith Memorial Hospital	2nd Cover
Travis Clinic Foundation and Travis Clinic Association	91
Wichita Falls Clinic	23

Physicians' Directory	92-101
Classified Advertising	102-104

Publication of an advertisement in *Texas Medicine* is not to be considered an endorsement or approval by the Texas Medical Association of the product or service involved.

EMERGENCY PHYSICIANS

EXPERIENCED PRIMARY CARE EMERGENCY PHYSICIANS SOUGHT BY STABLE, EXPANDING GROUP,

Opportunity to pursue career in established ACEP-oriented professional group, residency trained or experienced emergency physicians preferred. Guaranteed annual income plus full fringes.

Qualified physicians with active interest in emergency department administrative and/or teaching aspects eligible for directorship.

CALL OR SEND C.V.

GULF COAST EMERGENCY PHYSICIANS ASSOCIATION

12605 East Freeway, Suite 620
Houston, Texas 77015
713-455-1771

Starlite Village Hospital

Center Point, Texas

Ph.: 634-2212
634-2213

- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

R. H. McBride
Administrator

CHAMPUS APPROVED
JCAH: ACCREDITED

Christmas Seals Fight Lung Disease

AMERICAN LUNG ASSOCIATION

AMERICAN LUNG ASSOCIATION

AMERICAN LUNG ASSOCIATION
The "Christmas Seal" People
We care about every breath you take

Space contributed by the publisher as a public service

A character all its own.

Valium (diazepam) is a benzodiazepine with a character all its own. Pharmacologically, it has been described as more potent mg-per-mg than other available anxiolytic benzodiazepines. Pharmacokinetically, only Valium provides active *diazepam* as well as the active metabolites 3-hydroxydiazepam, desmethyldiazepam and oxazepam.

But the individual character of Valium is even more apparent clinically than pharmacokinetically. And far more significant. That's because of the patient response obtained with Valium. A response which brings a calmer frame of mind. A response which has a pronounced effect on the somatic symptoms of anxiety, particularly muscular tension. A response which helps the patient feel more like himself again because of the way Valium reduces the overwhelming symptoms of anxiety and psychic tension.

Another important aspect of the clinical character of Valium is safety. Though drowsiness, ataxia and fatigue are possible, these and more serious side effects are rarely a problem. Of course, as with all CNS-acting drugs, patients taking Valium should be cautioned against driving, operating dangerous machinery or the simultaneous ingestion of alcohol.

Unquestionably, many psychotherapeutic agents, including other benzodiazepines, have antianxiety effects. But one fact remains: you get a certain kind of patient response with Valium. It's a response you want. A response you know. A response you trust as part of your overall management of anxiety and psychic tension.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

a prudent choice in psychic tension and anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Letters

Where Contracts Permit, "Blues" Will Pay for CT Body Scans

Dear Ms Baker:

I have read the editorial, "Modern Medical Care Must Include Access to Computed Tomography," on page 134 of the September issue of *Texas Medicine*. The author of this editorial is not identified, but I would like to point out that in paragraph two there is comment about the refusal, or threatened refusal, of Blue Cross and Blue Shield to pay for CT body scanning.

In 1976, representatives of Blue Cross and Blue Shield met with several radiologists to discuss CT body scanning so that guidelines could be developed whereby Blue Cross and Blue Shield of Texas would be paying for computed tomography scans of the body. Following those meetings, guidelines were established, and we have been paying for body scanning in regular business. I doubt that we were denying coverage even before then, because before the guidelines were established, the rates for body scans had already been negotiated in the hospitals where body scanners were present.

Of course, certain of our contracts would not provide for such services; but, where the contract does permit our covering computed tomography body scanning, the claim is considered for payment. (We have provided payment for head scans in our private business, when contractually covered, since the hospitals have been providing that service.) At the present time, in our member hospitals and in private physicians' offices where CT scanning is being done, I am aware of no utilization problem and it is my opinion that those scanners are being used appropriately, so that in-depth review is not necessary in our private business. To my knowledge, the claims are reviewed only for a contractual coverage determination. I would anticipate that at some time there might be institutions and other providers that might pose a utilization problem where a further review of their claims would be necessary.

The portion of our business related to Medicare, of course, does not at present cover body scans, but head scans are covered services so long as the Medicare guidelines for coverage have been met.

If you have further questions or if I might provide you with additional information, please do not hesitate to contact me. I did, however, wish to provide information in response to the statement made in the editorial.

Louis W. Conradt, MD, Dallas,
Vice President, Medical Director,
Blue Cross-Blue Shield of Texas.

Editor's note: We appreciate the opportunity to provide information about the accessibility of computed tomography. The paragraph to which Dr. Conradt refers is a direct quotation from a statement prepared by the Ad Hoc Committee on CT Scanners and adopted by the TMA Executive Board on July 10, 1977.

As this issue goes to press, the TMA House of Delegates has just approved a change in the statement to indicate that the Medicare Bureau of the Health Care Finance Administration, rather than Blue Cross and Blue Shield, refused to pay for CT body scanning.

Letters to the Editor are welcome for consideration in this column. The Board of Publication and the editors reserve the right to excerpt letters in accordance with available space and editorial judgment as recommended by consultants. Neither the editors nor TMA shall be, in any manner or to any extent, directly or indirectly, responsible for views expressed by authors in this column.

Editorials

TB STILL HAS VICTIMS IN TEXAS

Tuberculosis is still a public health problem in Texas, but since 1968 the morbidity has been reduced by 19.2%, and the annual case rate by 27.9%.

Throughout the year, the Bureau of Tuberculosis Services, Texas Department of Health, provides services designed to prevent, control, and someday eradicate tuberculosis from the state.

The bureau maintains regional programs, the primary functions of which are to establish facilities for casefinding, treatment, and insuring that proper measures are taken to prevent persons at high risk from contracting the disease. Where there is a need for them, medical clinics are established and kept in operation until they are no longer needed. During the fiscal year 1975-1976, an average of 417 medical and nursing clinics were maintained for tuberculosis patients.

In the more permanent facilities, the State Chest Hospitals, diagnostic, treatment, and follow-up services are provided for patients with tuberculosis and other selected chronic pulmonary diseases. They utilize the most modern techniques in medical care programs and work closely with the regional programs to insure complete and effective patient services.

Emphasis has been placed on educating the hospitalized patients so they will understand their disease, the significance of their contagion, and the importance of continuing their prescribed medications and follow-up visits to medical and nursing clinics.

Texas' TB program was born in 1963 when the governor appointed a committee to eradicate the disease. Its report led to legislation which consolidated in the Department of Health all responsibilities, powers, duties, authorities, and functions associated with finding, treating, and preventing tuberculosis in Texas. In 1965 the health department created and staffed a new Division of Tuberculosis Control, and regional programs were established.

The continuing philosophy has been that involvement of many people is necessary for an effective tuberculosis control program, and private physicians are among those who have contributed much to the achievements that have been made.

Information about tuberculosis in Texas and about the work of the Bureau of Tuberculosis Services is published in the bureau's annual report. The full "1975-1976 Annual Report on Tuberculosis in Texas" is available from the Texas Medical Association's Memorial Library.

Robert B. Skinner, MD, Austin.

230338

THE LIBRARY
UNIVERSITY OF CALIFORNIA
San Francisco
THIS BOOK IS DUE ON THE LAST DATE STAMPED BELOW

7 DAY LOAN

7 DAY
APR 26 1978

RETURNED
APR 26 1978
7 DAY
SEP - 3 1978
RETURNED
7 DAY
SEP 6 1978
SEP 13 1978

7 DAY
SEP 13 1978

15m-6,'73(R176884)4315-A33-9

ST

331065